

TULETIDE AUABED

Wear a "BENJAMIN"



In the good old days of silks and frills-

Benjamin Clothes

In these days of hustle and bustle-

Benjamin Clothes

Are a habit.

It's a good habit, try it. Let us help you cultivate it.

This is Overcoat Time-See Our

Beniamin Beauties

\$18.50, \$20, \$25, \$30, \$35, \$40.

WE have a special Berger Overcoat \$15 value that will interest you at

Wear the



Mail Orders Promptly and Carefully Filled

Benjamin Clothes :: Stetson Hats Manhattan Shirts

THE TIGER

THE CALIFORNIA S C H O O L O F MECHANICAL ARTS

VOL. IX No. II

DECEMBER, 1911

SAN FRANCISCO, CAL.

CONTENTS

Literary Department:	ige
The Race (D. McCaw, '13)	3
John Locke (Catherine Boyle, '12)	
Which One? (Frances Martin, '12)	
When Law Came to Little Gulch (W. Waterman, '14)	
•	10
Technical Department:	
The Production of a High School Paper (Page Austin, '12)	14
The Manufacture of Felt Paper (Samuel J. Ogilvie, '13)	18
Editorials	20
Exchanges	22
School News	24
The Girls	31
Shop Notes	34
Athletics	38
Joshes	42
Ads	48



Sixteen steel devils, enveloped in dense clouds of smoke and dust, were hurled at half-minute intervals through the air, amid the deafening roar of their exhausts, and the wild clamor of the speed-crazed mob. Tearing up the rough country road at their full-rated sixty and seventy "horse," they appeared as veritable Furies.

Barely had the sixteenth monster been dispatched, when the Apperson Jack Rabbit Number 3 flashed by the grandstand, establishing the record time of 8:05 3-5, for the ten-mile lap, setting the terrific pace of 74.2 miles per hour. The Apperson was instantly followed by Pope-Hartford Number 1 and Number 2 Thomas, with the rest of the cars digging up the course in regular order, save that the National 15 had traded with Number 14 Fiat. This order was maintained for two laps, although many cars dogged their leaders, choked and blinded by an atmosphere of dust.

In the third lap, 2 broke away from the Pope-Hartford on the straight-away, but the spurt was too much of a strain on the engine, and the abused car slowly crept back and followed White Steamer Number 10, misfiring crankily at its humiliation. The Apperson lapped the Elmore 16 on a banked turn at the beginning of the fourth lap. With Marmon Number 4 closely pressing the Elmore, Number 1 taking the dust of the Lozier 5, and the National leading the American Mercedes Number 11, two more laps were reeled off.

The sixth lap was the start of the finish of several cars. The Thomas, after a game effort to regain its former position, finally "blew up," withdrawing from the contest; the Marmon threw a tire, and retired to position eight. Attempting to pass the Fiat on a narrow turn, the Elmore crashed through a fence, and was totally demolished—when the curio fiends finished their work, the chassis was the only portion of the car left intact. Naturally, the steamer burst into flames, and was skillfuly run into a creek. The Comet Number 9, the Stearns 8, and the Mercedes were forced to their pits for sets of tires, giving the National the dust of the Stevens Number 6, which had been passed successively by the Mattheson 7, and the second Pope-Hartford Number 12.

The mob went wild when 1?, after overtaking the Mattheson and its own team-mate, sensationally thundered past the Lozier directly in front of the judges' stand. Groping blindly—if such it may be called—at the rate of seventy miles an hour, the Stevens, completely obscured in a cloud of dust, plunged into the grandstand, lopped off its driver's left arm, crushed several spectators, and was splintered into an unrecognizable mass of twisted steel and bits of wood. Barely escaping the wreck, by jamming his

brakes, the driver of the National turned in at his pit to replace his ripped tires with a new set.

With a running time of a few seconds less than one and one-half hours, at the end of the tenth lap, but eight of the original sixteen entries were left to fight for place, with the Lozier maintaining a slight lead over the Apperson, Pope-Hartford 12 and National. The Mattheson turned turtle on a bank and crushed its occupants to death. Bunched together, a full minute behind the National, were the Marmon, Fiat, Mercedes and Sterns.

A careless dog who—unmindful of all warnings and danger signs—had attempted to cross during the seventh lap, brought about the climax to his own career, and that of the little Comet, which, due to its game persistency throughout the race, had won a place in the heart of the crowd. Buick Number 13 failed in a very creditable attempt to scale a telegraph pole; the Mattheson was eliminated on account of a sulky curburetter, while the Fiat, with a broken steering knuckle, was pushed bodily off the course.

All the remaining cars replenished their fuel supplies at various stages between the tenth and fifteenth laps, thus shifting the running order in a great degree. Due to constant tire trouble, the Stearns and Mercedes were completely lapped by the leaders. At the beginning of the seventeenth lap, with but a distance of thirty miles yet to cover, Number 12 held the lead, with the Marmon, Lozier and National next in order, the sister car Number 1 of the leading Pope-Hartford, a half lap behind, taking the dust of the Apperson.

In fourth position, full four minutes in the wake of 12, the driver of the National realized that the real test of the race was at hand. He was one of the few drivers who had handled their cars consistently from the beginning of the race. The self-satisfied purr of the engine, and the steady roar of the exhaust told him that the car was feeling the limit of the throttle. Dare-devil tactics were the only ones by which he might hope to win the race. Telling himself that he must win and uphold his own reputation, even more than that, the reputation of the car, he leaned over and beckoning his grimy mechanician, shouted a terse command—to watch the curves! Instead of throttling down his engine as usual, at the next curve, he held his speed, and swinging wide, rounded the curve, braking just in time to right the car and sped after the Lozier.

Satisfied with the results that gained him so much ground, he pursued these tactics at every curve. He soon overhauled the Lozier and dogged the wake of the Marmon. This he succeeded in passing, after several attempts, when half way around the nineteenth lap. Far in the distance could be seen the dust cloud of the leading Pope-Hartford. The National broke all previous records for the course, in the eighteenth lap, by the remarkable time of 8:00 1-5. At the beginning of the last lap, with but half a mile separating the two cars, the National driver threw all caution to the winds. Guided by the unseen hand of a pitying Fury, and speeded by Mercury, the National felt the clutch of the brakes no more—miraculously righting itself, and flying after that ever near and nearer dust cloud.

When half way around the course on the last lap, the cars were separated by a matter of rods. Hardly touching the high places on the last curve, the National flew at 12. Within a half mile of the tumultuous grandstand the cars were racing hood and hood.

The National darts ahead! A sharp report is heard! Number 12 shoots into the lead, and the National hobbles over the wire on bare rear rims. In a horrible frenzy, the National's driver curses himself, the tire, its manufacturers, and falls weakly from his car.

When finally able to sit up and talk after a week of delirium in the hospital, the driver was greeted with the statement that he had overcome the handicap necessary to defeat the Pope-Hartford. He had won the race! D. McCAW, '13.

John Kocke

There were four of us in the old doctor's living room that Christmas afternoon. The day had been one typical of California, mellow and golden, with just a touch of winter in the air and now, in the late afternoon, the sun glinted the tops of the trees in the park and shone on the Marin hills. We old folks were content to watch another Christmas slip away into twilight, but across the hall the young people were dancing.

"Have I ever told you of John Locke?"

It was the old doctor who spoke. He had closed his magazine and was looking out onto the sunset. John Locke? No, we had never heard of him. Who was he?

"You know that after twenty years or so of the gold fever, the Californians came to realize that they had other resources to develop, and gold was not pursued with such furious avidity; but now and then a paying streak would be discovered and a little town would spring up. Some of these died a quick death, but others flourished, and it was to one of the latter that I came in 1870.

"The little town, Golden Pine, in the Sierra foothills, grew rapidly, and when I hung out my shingle from a little one-room shack, I soon had more calls than I could attend. There was more or less sickness all the time, the sanitary conditions being none of the best, and I would easily have done with an assistant. But the only one available was doing a rushing business in the next town, and could never be spared.

"One day there was an accident at a mine and three men were pretty badly hurt. I called to the other miners for volunteers, but they all turned white, stony men that they were, and turned away. I was in a quandary. Then a quiet-looking man stepped up, apparently from nowhere, and did just as I told him without a word. That was John Locke.

"From that time a close friendship grew up between us, and he often helped me with my work. But, although I knew all the ins and outs of the life of every man, woman and child in the village, the life of John Locke, my nearest friend, was to me a closed book. From his speech and manners I knew he had been well educated; that was all.

"Then one day he disappeared as mysteriously as he had come. It was the day before Christmas, and I was just a bit chagrined, for we had planned a little celebration together. However, I had plenty to attend to and in time that followed I almost forgot him.

"On Christmas Eve, two years later, he walked into my office—I now boasted an addition to the shack—and greeted me with a hearty 'Merry Christmas' as if he had never been absent at all. I was so surprised I forgot his unceremonious departure and welcomed him most gladly. That evening we had our delayed celebration, and he told me his story.

"It appeared that in his home town he had been in love with a very beautiful woman. She was all that was pure and good, and he bestowed on her all that was good in him. But, as I have told you, he was silent and reserved and what we would call bashfulness, but what he called 'an indefinable something,' held him back from speaking at the right time. So his sweetheart was wooed and won by his best friend, George Reeves. As a consequence, Reeves became the enemy of Locke. Poor Reeves never knew why, for that same 'indefinable something' kept Locke from declaring himself openly.

"After the wedding, Reeves and his bride moved out to the new West, and John Locke lost all trace of them. He became a wanderer, drifting

aimlessly from place to place, always trying to forget his sorrow.

"'I saw,' he said, 'many places and many things. I watched the sun set over the Grand Canyon of the Colorado and saw the great peaks tinted in all the colors of the world come out of the shadows and then slip back

into the purple night.

"'I've tasted life on the desert, and almost grew to love it, for there was no one to ask questions. But soon the great solitude tried my soul. Everywhere I looked, in the burning yellow sands, the shimmering faraway hills, and the intense blue sky—I saw her face, and so—there was nothing to do but start again.

"I joined a prospecting party and reached a little town in the edge of the desert. Here I worked for a farmer, and forgot I had ever been a university graduate; but I could not get rid of my thoughts. Then I drifted down into the Azter country, where I moved around the cliff-dwell-

ings for a while and tried in my imagination to repeople them.'

"Then," the old doctor went on, "Locke went back East; wouldn't succeed, and finally reached California again; and came into 'Golden Pine.' When the wanderlust seized him again, he was off without a word of ex-

planation to me.

"'When I left 'Golden Pine,' he told me, 'my thoughts were getting the best of me. It was Christmas, and you know how it is, or perhaps you don't, but anyway, I had to be off. I bought a horse and struck out for the hills. For almost a year I lived and rode among the mountains and found some little measure of peace. There was something satisfying to the soul in those great masterpieces of nature, the canyons, the firs and the pines towering far above me, and when I walked among them, I felt my utter insignificance.

"'Sometimes, at sunset, I would come to a ridge and look down on a valley, dotted with houses, whose tiny windows reflected the fire of the dying sun. At dawn, I watched the sun glint first one great tree and then another, and then dispel the silvery mist in the valley.

"When I grew tired of my own company I would help herd sheep on the mountain meadows, or ride down to the foothills and help at a ranch.

And all this to forget my thoughts.

"'Then, after a time, the spirit of the open failed in its soothing effect, the hatred for Reeves came back and with it my longing for his wife, and I knew I would have to seek something new.

"'The day before Christmas I came upon a farm-house, and laid in supplies preparatory to going back. The farmer urged me to stay, for it

was threatening to snow; but I wanted one more Christmas alone among the hills. It was quite cold and snow was falling on the upper slopes, but I pushed on and towards evening came to a little growth of firs, where I made a roaring fire. I was just preparing to make some flapjacks when I heard a low voice, "Ah, Senor!" I was so surprised, I dropped the frying pan into the fire and stood staring.

"'What I saw I shall never forget. There, framed between the glowing trunks of two great trees, stood an Indian girl. Her dress, as I remember, was in rags, but her face—on her face was a look of determination, patient endurance and suffering such as I have never seen since. And back of the entreaty in her eyes was something else which I could not understand

"'When I had recovered somewhat from my surprise, I relieved her of her burden. She sank at once to the ground and covered her face with her hands. I turned back the blanket from the bundle and found—a little baby girl, and a white one at that! It was asleep and, though the little face showed signs of much travel and discomfort, there was something familiar about it.

"'"Senor, give me water."

"This time the girl spoke in Spanish, and I was glad I could understand. I gave her the water and then demanded:

"" "Where did you get this child?"

""Ah, Senor, do not blame me. Must one always suffer for the sins of the husband? Senor, the hatred one man may bear another is past all understanding."

"'Had she come to tell me that? I knew it already, bitterly.

""Listen, I will tell you all. My mother was Spanish, and I was educated in a convent. I loved the good sisters, but my soul was that of my Indian father, and I longed to be away and free. And so when Fighting Buck came secretly and stole me away, I was happy—for a time. But a man soon tires of his plaything, and Fighting Buck grew cold and haughty. He no longer called me his little "Blackbird." It was now "Old Squaw!" Ah, how I suffered. I had no one in the world to comfort me and I could not leave him.

""Then one day he met Senor Reeves. She praised our little garden and when he offered her fruit, she smiled on him. And, ah, Senor, how he hated me from that day, and how he loved the Senora!" Here she paused.

"'Reeves, could it be? Out here in California?

""Tell me what did the lady look like?"

"'"Beautiful, Senor, with eyes like the blue water and hair like gold," the girl answered. "But let me go on. Once Fighting Buck tried to see the Senora, and her husband hunted him away. Then he hated Senor Reeves, as he hated me; and one day he stole the little girl. He Senora's little girl. And when I tried to take it back, he threatened to kill it, and he beat me. He took us far away from the town and I was afraid, so afraid, he'd do something to the little girl. One night I took her and fled into the mountains. Ah, Senor, the way has been long and hard, but you will help me. The Senora must have her little one. My heart is broken, but what must her poor heart feel? How she cries and weeps! All the way I have heard her. Senor, you have sorrow in your eyes, and I know you will help me. I shall never go back, for my Father calls. But you, Senor, you are a man and will promise me?"

"'I looked into her eyes again, and now I understood the look. It

was the shadow of death. She was speaking again:

""Senor, I have suffered to bring back to the beautiful Senora that which my husband stole from her. She is good and true and does not know the love he bears her. But, Senor, it was wrong for him to covet what was another's and cast aside his own."

"'I saw the light fading in her great dark eyes.
"'But tell me, where does the Senora live?"

""Tre Mones. Ah, Senor, don't forget, you've promised me."

"'And there, beside the dead, cold ashes of the fire, she passed away. But I held the little girl—so like her mother, warm in my arms and pondered over the Indian girl's words. Had I not all these years been coveting what was another's and wasting my own life? The poor, hunted girl had shown me my mistake, and now I was too late to help her. At least I could keep my promise.'"

"And did he keep it?" We demanded eagerly.

"He did, and his desire to make amends for the life he had wasted was so great that it overcame that 'indefinable something,' which had possessed him before. When he had restored the child to its parents, he came to me; but he left the next day to try and do some good in the world. I have never seen him since."

CATHERINE J. BOYLE, '12.

Mhich One?

The setting sun turned its face on the little mission just as the good father blessed his dark-skinned children and sent them on under the care of the sisters. Everywhere a happy, smiling face was seen, full of love for those who had come into their land with light from the outer world.

But there was one face, strong and beautiful, that was full of discontent. The words of the father fell on deaf ears and the soft, dark eyes were ever turned toward the hills, where the evening shadows were beginning to creep. Wanonah's footsteps lagged as she followed her other dark sisters to their new home within the mission walls. Soon she was left far behind, her eyes seeming to search the hills and plain with longing, such as is seen in the eyes of an animal held in captivity.

Gathering her charges into the quarters, the sister closed the great oak door and barred it. Each one scampered to her respective room and soon all was still except for the soft footsteps of the sister, whose duties were not done until she had peered into each room to see if all were well. At Wa-

nonah's door she stopped and in quiet tones she spoke to her.

"Wanonah, why are you so discontented? Are you not happy here? Your mind is always elsewhere. You do not mix with the others, your work is only half done. You must improve; I am sorry to have to speak

thus; I hope it will not happen again. Buenas noches, mia Nina."

She closed the door without waiting for an answer. Wanonah turned toward the closed door with a hurt and angry look, and sprang from bed. The small room was now dark except for a stray moonbeam which had found its way through the iron-grated windows. She stopped, listened and then tiptoed across the room to the rudely constructed chest of drawers. Again she listened, but heard nothing. From one of the drawers she took out a dress, not like the one she had on, but one of skin, trimmed in beads and

fringed at the bottom. Next she drew out belt, a headband, feather, and

lastly a pair of beaded moccasins.

She placed them, one by one, across the foot of the bed; first the dress, which stood for the glorious outdoors, nature and, most of all, freedom. Next to the dress she placed the headband, belt and feather; these were her greatest treasures—they had belonged to her mother, one whom she had loved and honored, one whom she would have given her life for if she could, and one whom her heart cried out for when she was reprimanded and when the nights were long and dark. The pretty moccasins were the last to be added. As she gazed at them she could feel the warm earth under her feet, the autumn leaves crackling and the warm fire driving away the chill of the snow.

Thus her mind ran on: Should she attempt it? It was a long way to her father and his tribe. Yes, the sisters were good to her; she had everything except—her heart's desire, freedom. It would be hard to leave all that the mission had held for her, all that it still held. She had learned quickly and readily all that they had given her, and waited for more. She had been the most willing worker; often doing the work of others who found their tasks irksome. Her English was now as pure and good as that of the sisters, except for a word of her own language now and then.

She had done everything well with her whole heart and mind.

It was hard to leave—more than she could tell; but how good it would feel if she could only be free for a few days. To be out in the wilds, to feel the wind in her face as she rushed across the plain on her pony; to feel the warm earth under her feet, to hear the murmer of the waterfall answering the wail of the trees; to hear the call of the wild birds; to feel the cool water encircling her body, and to watch the beautiful sunsets at eventide after the sun had sunk behind the evergreen forest-covered mountain. The temptation was too great, and before she had time to think further the dress that stood for all that her heart longed for was on, and the other dress, which seemed to confine her within such narrow boundaries, lay in a heap on the floor.

As she crept through the dark hall to the door, her moccasined feet gave out no sound. The great door was reached in safety, but coming down the hall she saw the dark-clad figure of a sister. What should she do? Slowly the form approached the trembling figure in the corner. Nearer it came, with measured tread, and Wanonah held her breath lest she should be heard. On came the form, and unconsciously Wanonah besought first her god and then the white man's God to help her. Her prayer was answered, for the sister turned in at a door directly at Wanonah's feet. Some minutes passed before the Indian maid dared slip the bolt of the door. A gust of cold night air rushed in as the great door swung open on its rusty hinges to let the maid of the forest creep out.

II.

"Wattawano, why can't you leave me alone? Why do you follow me? I don't like you or your ways." She spoke in the musical language of her tribe, but her darkened eyes spoke more of her dislike for him than her words. Wattawamo sat above her on a rock, regarding her with a sarcastic, haughty, what-do-I-care expression on his face.

"If your father, my chief, say you marry me, you do. He likes me. I

will break you, eh! You wait."

"My father loves me, Wattawamo. He will never make me marry you if I do not wish. That is all. Go! Your very sight is more horrid than a snake's." She turned as she spoke, her black eyes snapping and emphasizing all she said. The Indian, though, had not heard, for he was crouching and alert, shading his eyes and looking out across the plain, which lay before them. Wanonah fell to the ground instinctively and looked to see what had attracted his attention.

Slowly wending its way across the plain was a small party of immigrants. For several moments the two watched the pitiful little band; then the lad sprang into the surrounding thicket. A sound of hoofbeats told her he had left. The little band had ventured on the tribe's now diminishing land, and he had gone to call the braves. Her mind flew over the picture that would probably present itself—the painted warriors slowly surrounding the emigrants, and then, the horrible death of each.

The pathetic little band was coming nearer, and as it came the heart of the girl went out to them in sympathy, felt for them, and it seemed her duty to warn them of their danger and save them if she could from this barbarity, as it seemed to her.

The waiting girl sped across the plain to the band, the warning given and the flight begun just as the first of the warriors came into view. The emigrants saw in what great danger they were andturned to the girl for help. Spurring her pony to the head, she lead the way. On came the warriors, and on flew the little band. At the head she rode, urging them on, uttering words of encouragement. A mother and child cried to her to save them; a father gritted his teeth and groaned; and the young man, on the leading horse at her side, clenched his hands, gave her one look from the blue eyes that had tightened, not fearingly, but with a fixed determination, which was all but uncanny. The look changed to one of question and entreaty, which would strike terror into her heart if she deceived them.

Little by little the warriors were gaining on them; now the hoofbeats could be heard; now they could hear the panting of the horses. She turned and tried to urge the over-strained horses on. But a little way and the boundary between safety and death would be passed. She heard the mother cry out to her once more; she saw the road shorten its distance before them; she felt the hot breaths of the Indian ponies fan her cheek when in almost one bound they crossed the river and were on their way to safety. An Indian maid had saved the emigrants from the wrath of her own people.

She was immediately surrounded by the grateful refugees. On all sides she saw ones she knew—the good father, the sisters, the dark-skinned sisters, and last of all, those whom she had saved. Words of gratitude and praise came to her ears, but her eyes were on the strong face of the man who had ridden at her side. The eyes had softened and spoke of gratitude, which began to mean more to her than the praise of all the rest. Once she thought the eyes spoke and confessed more—that which she herself began to realize; that a love greater than all else had come into their hearts.

Days passed and Wanonah remained at the mission, afraid to return to her own people. They surely had seen her as she led their prey away from them. She was happy now at the mission; her work was full of delight. Only to be near Ward King was all she wished. The sun seemed never to set on their happiness.

III.

Excitement prevailed before the mission. Many eyes were centered on Wanonah and other eyes were turned toward the retreating figure of an Indian.

"Tell us again, Wanonah, what the messenger said," cried one voice.

"Do tell us, Wanonah," cried another.

Others echoed this same request until Wanonah saw that it was futile to escape.

"My father has sent for me. Ward also. The mission will be de-

stroyed if I do not go. Tomorrow, at sunrise, we are to be there.'

Faces, on all sides, turned white, no voice was heard, for all realized that she was under the disfavor of her tribe.

The blue eyes of Ward flashed and his mind was in a turmoil when he

spoke

"But we can flee and get away from the wrath of your father."

"Just think of the mission! It must be thought of."

"Can't it defend itself?"

"No, nothing could save it, but—you and I. If we fled from here, where would we go? I can never marry you. You must think of what that would mean to your father and mother and little sister. You would be an outcast from your own people. And I—I must live in the forest—with my people. We must go. My father will not harm you, so have no fear."

"Wanonah, I, too, could live in the forest. How can I—"

"My father's tribe would torment you, drive you from place to place until you could not find shelter or food."

Ward saw that there was no way. There was no forest deep enough to

hide them, or city large enough to hold them.

This time Wanonah was not welcomed by her father. The eyes of the great chief flashed with anger. By his side stood Wattawamo, the favored of the chief, the cunning, revengeful, deceitful, crafty Indian, whose only thought was to possess Wanonah.

All was hurry and scurry when the two arrived. Messengers were running hither and thither, calling the tribe together. Soon the two, as they stood before the chief, were surrounded by them. The chief raised his hand for silence. All was still He began to speak in the musical language of the tribe, his great voice resounding in the hills.

"Wanonah, my only child, has turned against her tribe. She has aided the white man. She knows the penalty for that. But more. She has a lover, a white man, a pale face. She has sinned twice against her tribe.

But I am lenient."

The favored of the chief brought and set three cups before her.

"I shall give here her choice. The first cup contains wine and if chosen she takes the white man for a husband. The second contains poison. The third the drink of the tribe—this stands for our brave Wattawamo."

Mutterings were heard and heads nodded as the great voice ceased. Wanonah stood before them, looking at the cups, then at Ward, who had grasped the meaning, and then at Wattawamo. Each Indian had turned his face, and the only face that looked upon her was the rising sun. Wattawamo gave one look and crept away, his cowardly heart unable to stay him when the test had come. Ward turned his face away. He could not endure to see the girl's despairing face and know that he could not help her.

She was perfectly calm. Perhaps, her brown face paled a little. Her thoughts were clear and concise. She must choose for the best of all. Her mind ran on: The first cup stood for Ward, but if she chose this, she knew that life in a country of civilization would, in time, be impossible. He would not be happy in the forest, away from his people—but what was life without him? The second cup represented a thing she could not bring her mind to think of; she was not a coward; but terrible, slow torture? The third cup represented to her a life worse than death. Though she would have the forest, the birds, the streams and all she longed for, she would be without that which Ward could give. She gazed at the three despairingly. She could not add to Ward's happiness; Wattawamo would kill her, and death was hideous torture.

She looked toward Ward entreatingly—and then slowly, with all the majesty, matchless grace and renunciation of her tribe—she took the cup. FRANCES MARTIN, '12.

"When Cam Came to Little Gulch"

Miguel rode hard. The poor pinto, feeling the slight pressure on the bit, came to an abrupt stop. Miguel, believing that he had eluded the Vigilantes, leaned forward in a restive position on the saddle. He rolled a cigarette in his powerful hands, and lighting it, gazed with half-closed eyes across the mesa, debating in his mind whether to return and surrender for the murder of Bale, the little Frenchman, or to ride over the Mexican border to the home of Concha, his sweetheart, where he was sure of protection.

Miguel believed in the phrase: "An eye for an eye, a tooth for a tooth," and yet, intermingled with ideas of justice were thoughts of Concha. He was not afraid of death—assuredly not—and there was a chance that he would not be convicted, for he knew that he had fired in self-defense, but he knew, too, that the Vigilantes and public sentiment were against gamblers. Yes! surely, flight seemed the wiser course.

Miguel had had his chance. Upon the advent of law in Little Gulch he had been told to reform; not merely warned, but threatened, and he had not attempted to cheat at cards, until Bale had resorted to trickery—and then the quarrel—the shot—and here he was—the fugitive from justice.

There seemed but one course for him to take—to go to Concha. She

would absolve him and he would find consolation.

He still leaned across the saddle, until fearing that a brewing midsummer storm would overtake him, he rode onward into the timber belt. Here the animals, forewarned by instinct of the coming storm, hurried to their lairs amongst the rocks and in the hollows, and Miguel and the pinto

passed onward into the shadows.

The first peals of thunder reverberated and the jagged forks of lightning illuminated the half-darkened forest, throwing everything into strong relief by the vivid light and shade contrasts. In the interval of darkness which followed the first flash, Miguel brought his pinto under the projecting branches of a towering Sequoia, and horror-stricken, confronted a cowering grizzly with several cubs. The bear made no advances, but seemed content to share the refuge with Miguel, growling only now and then to reassure the cubs and keep the pinto at a safe distance. The pinto snorted and trembled with fear, and Miguel, finding an opportunity, slipped his revolver from the holster and gazed at it—and at the single shell.

A terrific flash of lightning rent a hole in the earth and shattered a nearby tree. Miguel shuddered. The bear snarled and drew several quick breaths like a cat. The cubs merely glanced at the mother, finding here some new game, something only for their amusement. Another flash, and the Sequoia, rent in fragments by a bolt which killed the grizzly, was hurled forward on its branches, which, partly breaking the fall and entangling Miguel and the pinto, snapped like frail twigs and shifted the huge trunk, supported only by a boulder, across the bodies of Miguel and the pony. The pinto only moaned, and Miguel, feeling the horrible pressure on his back, slowly squeezing the life from him, reached with his one free hand for his revolver and placed it against his temple. The pinto uttered a piercing moan and Miguel knew that the animal's pain was the greater, and turning the muzzle from his own to the pinto's head, he fired—his last shell!

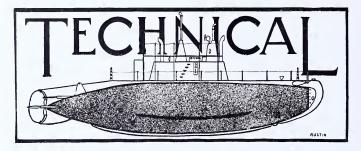
Well, he had done one good deed; he had ended the pinto's misery.

In his mind he reviewed his past life, from his innocent childhood to his early manhood, tinged with petty crime, and then to the more recent past—and it seemed to him, in these agonizing moments, as though this tree were the law, which had fallen on him and was dealing him justice.

The world grew black; Miguel's thoughts were with Concha, and he saw nothing. He sank back under the awful weight and heard only the playful purring of the motherless cubs, and then night came on and with it rest—for Bale had been avenged.

W. WATERMAN, '14.





The Production of a High School Paper

On a High School paper, where the editor, manager and almost the entire staff changes every six months, it is impossible that the staff know as much about the publishing business as they should when they start in. They must learn all the ins and outs of the business at the expense of the paper. Graduating managers and editors are supposed to instruct their successors on the production of the paper, but this is too much to be learned in a few weeks and most of it is learned by actual experience.

When the manager and editor first interview the printer, they are confronted with a bewildering array of questions and technical terms. How many books are wanted? How many pages are there to be? What will be its dimensions? What kind of paper is wanted for the body of the book

and for the cover?

What kind of binding is wanted? How many colors will the book be printed in? How many pages of half tones? How many pages of advertisements? What style of type is wanted and what size?

Most of these decisions are governed by precedent, but still the staff should know what they mean and be able to discuss them intelligently.

One of the first requisites in dealing with the printer is to give him good copy. Manuscript in pencil, on cheap, flimsy paper, and written on both sides of the sheet is not the kind to hand in, if prompt attention, clean proofs and reasonable prices are to be desired. A good quality of paper, uniform in size, should be selected and all copy should be typewritten when possible. All handwriting should be in ink and as legible as possible.

In arranging a book the question of size and style of type, the dimensions and shape of the pages, the selection of headings, initials, the choice of paper, ink, etc., and the determining of other details, should be carefully gone over with the printer before copy is submitted. Full consideration of these, and a clear understanding between editor and printer as to just what is expected, will save time, expense and annoying disputes later on. Punctuation, paragraphing, capitalization and other requirements for per-

fect composition, should be indicated in the copy.

When preparing copy for advertisements, it is well to lay out the mat-

ter in about the size and form desired.

If the size of the space will not permit of the insertion of all of the matter, the matter intended for such space should be indicated by letter or number, and should be written on a separate sheet, similarly marked. Instructions should be given relating to style of type, border, and location of cuts, but the editor should not be too explicit and exacting. The compos-

itor can do better work if allowed a little leeway and is allowed to use his own judgment.

The question of suitable paper for a certain piece of work is one that should be carefully considered. Harmony between type and paper is an important element in arranging a paper. Caslon faces, old style antique and letters which avoid fine hair lines are best suited to antique or rough papers. Line cuts of strong, simple design, work well with this type and on such papers. Half tone illustrations or zinc etchings, with very fine lines, should not be selected when rough papers are to be used. Type, ink and paper, properly chosen and judiciously used, will give the results desired.

The editor, having made all of these decisions and having, in the meantime, collected his material and corrected it, must label each story and mark at the beginning of each article the size of type to be used in the title. The copy is then sent to the printer and in a few days the galley sheets, or proofs, come back for correction. The proofs are long sheets of rough paper with the stories printed on them in any order, and with jokes run in in odd spaces to fill up the sheet. The number of galley sheets depends on the number of pages in the paper.

There are two sets of galley sheets furnished to the editor. One set he corrects. To do this he must know the proofreader's marks for indicating different corrections. The other set he cuts up and pastes into the dummy in the order he wants the finished paper. Each galley sheet is numbered and he must mark its number by the side of each article, cut from the sheet. The dummy, before it is pasted up, is nothing but a back copy of the paper. The advertisements are cut from the galley sheets and pasted in, the same as the articles. As soon as the dummy is pasted up it is sent to the printer.

Here the printer's work begins. Wherever there is a mistake in the galleys, the type are taken out and the correct ones inserted.

Each page has its heading, or title, set in large type by hand, and then the page is set upon a marble surface and the type hammered a little to make the faces of the type all even.

Half the page forms are set into the press at once, so that a large sheet of paper, printed on both sides, will make a thirty-two or sixty-four-page book when folded up. The page forms are set into the press in such an order that the pages will come in regular order when the sheet is folded.

The forms are then "made ready," i.e., they are made square with each other and with the press. This is an important point in the production of a neat paper. "Making ready" is costly, but if it is not done the print on some pages will not be parallel with the sides of the page, and this will detract greatly from the appearance of the book.

Next the press is started and several impressions taken. The pressman notices wherever the impression is light and cuts out pieces of tissue paper, which he pastes under the sheet of paper that the sheet that is being printed, rests on. The tissue paper is the same shape as the place where the impression was light and so causes the paper to be pressed harder against the half-tone or type. The entire sheet is thus made uniform in blackness. This is expensive and can be gotten along without. Still, it adds greatly to the appearance of the book, especially if it contains many half-tones.

iThe press is then started and the flow of ink adjusted so that every part of the form receives the same amount of ink.

The press that these large sheets are printed on is called a cylinder press. Its main parts are a large revolving iron cylinder, about two feet in diameter, and a bed on which the type is clamped that moves back and forth under the cylinder. As the cylinder begins to revolve, a sheet of paper is fed onto the cylinder and the paper begins to wind around it. At the same time the type is under the ink rollers. The cylinder continues to revolve and when the paper gets underneath, then the type moves under the cylinder and the impression is made. The type, bed and cylinder then reverse their direction of motion, the type moving under the ink rollers and the paper moving upward toward the top of the press, where it is taken and delivered onto a pile at the end of the press. The cylinder and bed again reverse and the same thing is done over again. The operation of the bed and cylinder is nothing more than rolling the paper between the cylinder and type.

After being printed, the paper is folded. There are machines which do this, but on good work, where a good quality of paper is used, the folding is done by hand. The folded papers then have the edges sheared off and the cover put on, then it is stitched; that is, the wires are put through the

back to hold it together.

A knowledge of how drawings are reproduced is necessary for the editor and art staff in order that they can make their drawings so that they will reproduce to the best advantage. High School students are taught drawing and designing as part of their regular course, but very few ever sketched or made drawings with the idea of reproducing them on metal, so that they might be printed. The art training, which may be of the best, does not assist the editor or manager in the production of a school journal as it might if the artist students understood the process of photo-engraving.

The illustration of a High School paper is of considerable importance. Of all publications on sale, the illustrated ones have the greatest sale. The school paper is not a money-making proposition, but to meet the cost of production it necessarily depends greatly on its sale in order to make it succeed term after term. To stimulate the sale, the editor and manager endeavor to make the paper as attractive as possible. They must work

hard to improve preceding numbers.

The ambition to improve upon a preceding number or numbers does not necessarily depend upon the size of the paper, the number of illustrations or the number of articles. The character in general makes the demand, and the thought and care given by the editorial and art staffs is what creates the interest of a student to secure and keep a copy as a reminder of pleasant school days.

As the editor is usually held responsible for the preparation and publishing of the paper, it is up to him to choose competent assistants. The writers of various articles and stories and editors of departments should

be directly interested in the subjects to which they are assigned.

The art staff should plan the arrangement of illustrations weeks in advance of the date of going to press of the book, quality of paper to be used, cover paper, and all such things should be left to the discretion of the art staff. Wholesale paper companies are glad to furnish samples, ink manufacturers willing to furnish catalogues, and with such aids as these, the color scheme and perfect harmony of arrangement can be raidily carried out.

The matter of making the drawings for reproduction by the photoengravers should be carefully considered. The book being planned and sizes of text pages determined, the artist has something to work on. First, he must know the size that the drawing is to be when reproduced; then the size that he will make his drawing. Usually in commercial art all drawings are made twice the size of the intended reproductions; this gives the artist more space to work on and a greater freedom from making fine hair lines.

Drawings or sketches should be made with black ink and done with pen only; working with a brush tends to give tones of color and graded effects that are unsatisfactory for reproduction.

The process of reproducing pen sketches or drawings is done by putting the copy before a large camera and making a negative therefrom to the required size for the "cut." One negative is then printed on a sheet of zinc. After being properly treated, to insure that only that part of the etching which is desired will not be eaten away, the plate is placed in a rocking tub of nitric acid. The parts to be preserved are coated with chemicals from time to time and the plate given as many "bites" from the acid as may be necessary to obtain the proper depth.

The unnecessary metal is then cut or routed away and the plate mounted on a wood or metal base. Particular care is given that it is adjusted so that the printer will have no trouble when making up his form for the press.

Illustrating a school paper with reproductions of photographs is a course that is not taught in the schools, and outside a few snap shots of athletic events, taken by some student, the work is usually done in the studio of a professional. The arrangements for the taking of the portraits of the graduates should also call for a little forethought. The posing of the person is left to the photographer; however, a certain sized picture should be insisted upon and all the portraits made this uniform size, because in the grouping of several portraits they should be all alike and the same background used for all. A black and white print, such as Velox, is preferable for reproduction.

The grouping of graduate pictures, various clubs, committees, usually have a decoration or plain background. The making of a background or setting for a group of photographs has up to this time been left to the art department of the photo engravers, but it should be in the hands of the art staff of the paper. The arranging of this is simple, indeed, and the manager is forced to pay the engraver for work that could easily be done by the art staff.

After the photographing, the groups are made up in dummy form, sizes are determined and the engraver consulted. The kind of engravings are decided upon, there being two kinds, copper and zinc. Copper halfones are preferable, because the tones of color and graded effects are finer and the results much better. A half-tone is so-called because of the screen which covers the entire picture and enables us to produce an etching in which are preserved the middle or half-tones, and we get a result which is exactly like a photograph, with the exception that the entire picture on close inspection will have a screeny effect all over. This screeny effect is what makes the cut or half-tone printible.

The process of half-toning is much the same as that of the line cuts, with the exception of the screen which is placed in the camera between the photograph and the negative. The screens are made of glass and vary in mesh, according to the kind of paper on which the half-tone is to be printed. Newspaper half-tones are usually 65 screen, which is a mesh of

65 lines to the inch. Half-tones for a school paper, printed on first-class coated paper, are made in 150-line screen. There are several styles of half-tones, such as the squared half-tone, the vignetted and the silhouetted. The latter two are more expensive than the squared, because of the additional handwork required to secure the desired effect.

The process of reproducing half-tones in more than one color is an exhaustive process, and as the expense of having the work done is so great,

very few school papers ever consider it.

Reproducing line cuts in colors is a simple matter of making one plate for each color, and most any effect in colors may be had by blending one on the other; such as printing the yellow first and a blue over it so that green is the result. The whole spectrum can be obtained in this way; red, yellow and blue being the basis. A separate plate is used for each color, so that it becomes expensive when several colors are used.

After each half-tone or line cut is made, proofs are made to show its perfection or imperfection. These are passed by the editor, and if accepted he makes up his dummy as stated before, and the cuts are turned over to the printer. A good form to follow is to number the cuts on the back and place the same number on the dummy where it is to go. This assists the printer and avoids delays and errors.

PAGE AUSTIN, '12.

The Manufacture of Felt Paper

Felt paper is a product of The Paraffine Paint Company of California, situated on the bay shore about seven miles from San Francisco. Felt paper is a soft, gray paper made of one-third woolen and two-thirds cotton rags. The finished paper is thirty-six inches in width and from one-sixteenth to three-thirty seconds in thickness. It is wound in rolls which weigh about six hundred pounds. This paper is used in the manufacture of various grades of roofing and for the deadening of sounds in the walls and floors of houses.

The cotton and woolen rags are obtained from Europe. The rags come in huge bundles weighing on an average of five hundred pounds. These bundles are composed of old clothes, rags and all kinds of cotton

goods.

After the rags are received, they are sorted, and all the material that is thought to be too stiff, such as canvas, overalls and coarse clothing, is thrown away and only the finer materials are kept. These picked rags are sent through a cutter. This cutter is composed of three blades which run at a speed of about eight hundred revolutions per minute. It cuts the rags into pieces about an inch square. These pieces are drawn up by a suction fan and deposited in bins. Buttons, nails, coins and other hard materials are deposited in a bin underneath the machine. It is not an unusual thing to find coins of large denominations cut in two in this bin.

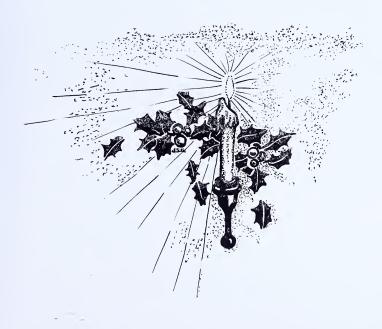
The rags are next placed in a beater which is full of water. The beater is a large, oval tub about three feet deep, eighteen feet long and eight feet wide. There is a partition in the middle of the tank about seven feet long. This is to allow the rags to circulate under a large drum, three feet in diameter. This drum has a series of bronze blades set around the edge about two inches apart. It is made to grind against another series of blades set in a flat block known as a bed plate. The purpose of this machine is to draw the fibres out of the rags. The wet rags pass under this

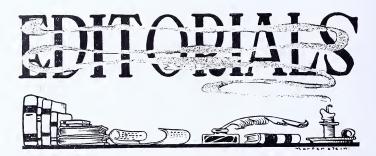
drum and are drawn out to a fine, grayish pulp.

This pulp is pumped, by plunger pumps, over a set of screens which remove all the foreign matter which has not been ground up. Then it is pumped into a large vat in which is revolving a large cylinder. The cylinder is hollow and is covered by a forty-mesh wire screen. The water in the vat is pumped through the cylinder, and the pulp, since it cannot go through the fine screen, is deposited on the wire screen. The pulp is now really formed into a sheet of paper, but it must be straightened. This soft sheet passes into a woolen blanket which acts as a carrier, the paper being too soft to stand any strain. The sheet on this blanket passes across a suction box which removes nearly all the water. It then runs between two rolls which compress the paper and squeeze the remainder of the water out of it. The paper is then strong enough to continue alone and passes on to be dried.

The drying apparatus consists of thirty-six revolving steel drums which are steam heated. The paper is threaded over them and by the time it reaches the end it is thoroughly dry. The paper is then finished by passing it over a set of very smooth rollers called calender rolls. These rolls polish off the paper and give it a glossy surface. Up to this time the paper has been seventy-two inches wide. It is now cut in two and wound into rolls. It is then shipped to all parts of the world.

SAMUEL J. OGILVIE, '13.





THE TIGER

The Tiger is published every quarter by the Students of the California School of Mechanical Arts (founded by James Lick), at Sixteenth and Utah Streets, San Francisco, California. Subscriptions—\$1.00 per annum. Single copies, 25 cents.

Advertising rates upon application to Business Manager.

Entered as second-class matter August 22, 1907, at the postoffice at San Francisco, California, under the Act of Congress of March 3, 1879.

Exchanges address to C. S. M. A. Sixteenth and Utah Streets, San Francisco, California.

JOHN R. BRUCE, '12. Editor
ELLARD L. SLACK, '12. Manager

EDITORIAL STAFF.

Catherine J. Boyle, 12, Associate.
Page Austin, '12, Technical.
Herman Fuchs, '12, Exchanges.
Viola Cahen, '12, School Notes.
Emil P. Schlichtmann, '12, School Notes.
Willard W. Beatty, '09(U.C), Alumni.
Arthur W. Wynne, '11 (S.), Alumni.
Edith F. McLoughlin, '13, Shop Notes.
Julien Mathieu, '12, Shop Notes.

Hilda Bettoli, '12, Athletics. Russell Rogers, '13, Athletics. Phillip Helfrich, 13, Joshes. Emil Pilli, '13, Joshes. Herman Christensen, '12, Photos. Madeline Hogan, '13, Art. Irene Saywell, '12, Art. Jay S. Green, '14, Art. John Martenstein, '13, Cartoonist.

MANAGER'S STAFF.

Arthur Copeland, Edgar Rust, Miss Ethel Buck, Mast Wolfsohn, E. Velisaratos, E. A. Janssen.

Here we are again! Fellow students, this is the Yuletide Number. Take it, tear it to pieces; then tell us our faults. We are always glad to get criticism from anyone, but especially from students in the school. This is a student journal and will always remain so. It is the students who will make or break this paper and therefore it is up to them to see that the management is supported.

Jolly Christmas will be with us in a few days, so all wear that glad smile; enliven that dying spirit and put more vim into that sluggish walk. "The Tiger" wishes everyone into whose hands it goes a Merry Christmas!

We're Some Rooters!

All those who have seen any, or all of the games played by our team, have come to know what real spirit is. The season started out with the Lowell game. Our rooters, under the able leadership of Robert Block, made the Lowellites sound like a peanut vender crying his wares in a menagerie where the tigers are roaring for an overdue meal. At least, we heard very little from their section, as it seemed only to consist of one or two who perhaps held "comps." We had hard luck that game and any one knows that if Cogswell can overwhelmingly defeat Lowell and we can decisively conquer Cogswell, then—just give us another chance at Lowell, that's all.

The next game, which was with Mission, was attended by such a bunch of Lick fellows that the Mission brass band couldn't show itself off. It was a shame to drown out such a fine band, but then—rooting sounds better to our ears.

Suddenly our team began to find their faults, and the result of finding them was the victory over Cogswell. Cogswell has always been our best friend, and there was excellent conduct shown by both rooting sections. Of course, as is always the case, we had the biggest crowd, and made Cogswell have a hard time to make themselves heard. It is mostly due to Block's untiring work that we were able to do so.

The next game was the worse exhibition of sportsmanship ever attended. The opposing school, from the rooting crowd to their flagman, played unfair. Here are some of the things done and seen by all: While Fuchs was endeavoring to set the ball for "Monty" to kick toward their goal, the opposing rooting section (they called themselves such) stood and jeered our men, trying their best to rattle them. Two of the opposing faction's team were knocked down by Trepte, and immediately upon the getting up of the fellows, one of them hurled a handful of loose dirt into Trepte's face. Is this sportsmanlike conduct? Certainly not. If clean playing does not come with Rugby, then turn to ping pong, as the ministers would have us do.

The Girls' Issue

As has been the custom for the past two years, the next issue of "The Tiger" will be the Girls' Issue. This will, no doubt, be the greatest Girls' Journal ever put out from Lick. The management selected to take charge of the next "Tiger" have proven by their past records that they are conscientious workers. Miss Catherine J. Boyle, '12, will be editress, while Miss Ethel Buck, '12, will sit in the manager's chair.

The paper will be run by a staff consisting entirely of girls, picked from those who have shown that they are capable of doing some literary work. Any girl who is interested in this kind of work should not fail to try out for the staff. Every position will be open, and Freshmen will have an equal chance with the Seniors.

Little need be said to the fellows. No doubt, each and every one of them will support this coming issue as well as they have the others. Everybody get in and boost!



The exchange staff wishes all of its friends a most successful and Merry Christmas. We look forward to some very creditable and interesting papers from our numerous friends, and sincerely hope that the exchange editor will be kept busier than he has of late. At the present time he is sorry to say that he has but few exchanges. This, perhaps, may be explained in two ways. In the first place, a great number of our exchange friends issue their papers semi-annually, and then again the new staff has only dealt with commencement issues and has not, as yet, accustomed itself to the mid-term editions.

The following criticisms are given in an impartial and unprejudiced spirit, which, we hope, will be of some assistance to those whom it may

Modrono, Palo Alto, Cal.—Your cover design is decidedly neat and appropriate. We are glad to note that you are one of the few of our exchanges that provides for a flyleaf. The general arrangement of your paper is good, but the drawings are of a scratchy order and not up to your usual good standard.

The Lowell, San Francisco, Cal.—A newsy paper, as usual, but we cannot help but think the same as the "Totem" exchange editor when he says: "But don't you think it would be better to issue a large paper monthly and give it a cover worthy of the contents?" Why use the word "campus" in one of your headings?

The Clarion, Appleton, Wis.—You lack several very important departments. Especially is this true of a table of contents and an exchange column. More cuts, and the filling in of the blank spaces among your ads. would add materially to the general appearance of your paper. "Autumn" and the cut "By the Wayside." are, indeed, clever.

and the cut "By the Wayside," are, indeed, clever.

The High School Herald, Westfield, Mass.—A paper from learned Massachusetts is always welcome. We would suggest that you try and

improve your cuts.

The Crimson and White, Albany, N. Y.—"Soliloquy of a Small Boy" is very good. Where is your table of contents; and again, why not increase your exchange column? We are glad to see such a large joke department.

The Echo, Santa Rosa, Cal.—The September number of "The Echo" is very neat and well arranged. You are one of the best of our exchanges that are published monthly. Keep up to the good record.

Orange and Blue, Sweetwater, Tenn.—We enjoy your small, but newsy

columns. Come again!

Blue and White, San Francisco, Cal. (September).—Why have you forgotten the all-important joke department? You are our only exchange

that has made such a mistake. "Early Aeronautics" is a very instructive and interesting article and shows careful thought and consideration of the

subject.

The Russ, San Diego, Cal.—You are a very welcome exchange and we are always glad to see you. The arrangement of your paper is good, but why not have a literary cut for that department? We are glad to see that you have a goodly number of jokes. The class of paper used is not entirely satisfactory.

The Polaris, Freeport, Ill.—A good semi-monthly paper to say the least. Why place an ad. in the center of the paper, especially between the editorial and exchange departments? Aside from this fault you are very

good. Always welcome, "Polaris."

The Wilmerding Life, San Francisco, Cal.—Your paper is very neat and, as usual, containing good cuts. We are sorry that these cuts, after having rendered such valuable assistance in the commencement issue, must be used again. Why not get some new and original ones? You are among the best of our exchanges.

The Clarion, Salem, Ore.—An exchange column would not be out of place and some of your cuts are not as good as we would like to see them.

This may apply to the football cut.

Tolo, Seattle, Wash.—Your cuts are good, but you lack a table of contents.

Totem, Seattle, Wash.—Your paper is very good and contains many good cuts. The proper spirit seems to prevail throughout the paper and your successis not to be doubted.

Cogswell, San Francisco, Cal.—A neat paper containing considerable

wit. You have the right idea, Cogswell; stay on the job.





Founder's Day

Founder's Day at Lick was observed by the students on September 21st, 1911, as the thirty-fifth anniversary of the day on which James Lick signed a bill of trust and bequeathed the money necessary for the building, the equipping and the supporting of our school.

At eleven o'clock the whistle blew and all the students from the various classes and shops assembled in the corridors.

Mr. Merrill opened the celebration by announcing the object and purpose for which the day was to be celebrated.

Mr. Simms, Vice-President of the Board of Trustees of the school, presided over the meeting. He announced the receipt of approximately \$25,000 from the widow of F. Ginn during the past year, and the expectation of the Miranda Lux fund of \$900,000. He introduced Mr. Holbrooks, president of the Board of Trustees of the Lux estate.

Mr. Holbrooks declared that the best was being done and that it was expected that the fund would, in about a year, be free from the legal litigations which have held it inert for the last fifteen years.

Mr. Simms then introduced Mr. Roncovieri, Superintendent of the Public Schools of San Francisco, who was to give the address of the day.

Mr. Roncovieri gave a very interesting and profitable talk which was appreciated by the students. He spoke of the great need of technical schools such as ours and about the few in operation at the present time. He described the institutions at Belfast, at Edinburgh and at Paris and showed the immense value of the schools and how well they were appreciated by the people in the foreign countries, where the enrollment of one school was as high as six thousand students. He said that ninety per cent of the money allotted to high schools went to the so-called classic schools and declared that only two per cent of the people followed professional life. He said that it was his intention to establish as many trade schools as possible and to try to induce as many rich men to endow such schools as he and his friends could.

Mr. Merrill again spoke and announced that the night school would commence on October 9th and that a normal school for girls, for the purpose of training young girls as teachers, was soon to be started. The Miranda Lux fund would enable several hundred more girls to attend the school. New buildings on the lots at Sixteenth and Potrero avenue were to be planned, and that the James Lick, Wilmerding and Lux funds were to be combined in the project.

Evening School

The California Evening School of Mechanical Arts is the result of and is indebted to the Miranda Lux fund for its existence.

The shops now open in the evening school are: Machine shop, forge

shop, foundry and pattern shop.

The machine shop is literally full to the neck and has a long waiting list. This shop has about twenty-five pupils now working. The waiting list is large and exceeds forty in rough numbers. Mr. Sunkel is satisfied with the work of these men and expects big results before the end of the year.

The forge shop is also well filled, and Mr. Mathis has about twenty-five eager blacksmiths using hammers and tongs. There is also a waiting list in this shop, but there are only about half a dozen of these, and it is expected that these men will soon be installed. The blacksmiths of the evening school accomplish more than our day school Sophomores, and consequently keep Mr. Mathis busy looking for jobs.

The foundry has about a dozen men on its list and they are doing a great deal of work, making molds and cores. Mr. Lacoste is well satisfied with the work done and finds no need of "crabbing" at the evening men

as he does with his over-ambitious Sophomores.

The pattern shop has only about three or four enrolled. This shop is not working on account of numbers, but it is expected that it will be well filled and in full swing when this paper is issued. Mr. McLaren will have to get his Freshmen working overtime in order that the foundry will be well supplied with patterns.

The shops are open only on Mondays, Wednesdays and Fridays.

On Tuesdays and Thursdays the pupils take up their academic work. The academic work is under the supervision of Mr. Plumb, principal of the night school, and Mr. Potts.

Mr. Plumb is teaching strength of materials, theory of electricity and

its uses, and elementary arithemetic.

Mr. Potts handles the mechanical drawing and the advanced arithmetic. He is expecting to take up algebra towards the end of the year.

Any journeyman and any man who has served at least two years apprenticeship may enter the school and without examinations. These restrictions are made in order that only those who are really in earnest about their trade will be benefited.

A course for firemen has been planned and will not doubt soon be in operation. This work will be almost entirely theoretical, but a number of engine tests on different steamers will be made. This course is given in order that firemen may be assisted in obtaining their marine engine licenses.

The evening school started on October 9, 1911, and so far has proven that it will be very beneficial. Considering the ever-increasing waiting list and the spirit and enthusiasm with which the work is taken up, we can do nothing else than proclaim the evening school a huge success—thanks to our benefactor, Mrs. Miranda Lux.

The German Club

The first regular meeting of the club was held on Thursday, October 26, 1911, at which the members signed their names. President Schlichtmann announced to the members the purpose of the club, and appointed a

Program Committee consisting of Miss Boyle, Miss Von der Mehden and Mr. Lenzen, to prepare a short program of entertainment for every meeting.

It is hoped that Mr. Heyneman will give some interesting lectures, which will be highly appreciated by the members.

Mr. Schlichtmann also announced that he intended to have the club give a German festival at Christmas.

Miss Otto's suggestion for the club to be of a social nature and to acquire familiarity with the German language will be carried out.

Considering the purpose of the club, and requiring no dues, this organ-

ization should be well supported by the German students.

To the German Club: "Wir wünchen Ihren viel Glück."

Kallies

The first rally of the year under President Fred Worth was held on September 13, 1911. The rally was well supported and was made a huge

The rally was started by a selection from the orchestra. This was the first public appearance of the orchestra, and it proved itself as a big attraction for the rallies.

President Worth spoke about the student body dues and demanded that the dues be paid as soon as possible. His demand is just and right, for they should be paid, as the treasury needs it.

Neuhaus, as manager of the swimming team, announced the A. A. L. swimming meet and asked for support, as a good program had been arranged.

Christensen spoke of the Camera Club and showed the students that the club was not dead by any means.

Rust was too cute for anything. He has learned to speak at a rally about football without "crabbing." We wonder what the cause was, as we are not used to it.

The orchestra played two more selections, and the rally was closed with a yell.

Rallies were held on Wednesday, September 27th and on Friday, September 29th for the purpose of boosting the Lick-Lowell Rugby football game.

Assistant Yell Leader Block led and reintroduced a number of our old yells, which most of us had forgotten. Hand it to Block, fellows, there was a lot of "pep" at the rallies.

The orchestra played on Wednesday and showed a great deal of improvement over their last appearance. Everybody can congratulate the orchestra, for it cannot be beaten. Because of the limited time, only two selections could be offered, although everyone wanted more.

President Worth called on Coach Petice. The students showed then and there that they could show appreciation when called upon to do so. He said that the team was in good condition and that everyone was out to fight.

President Worth then called upon a number of the football squad to address and favor the bunch with a few words. Block led yells for all those called upon, and his efforts were not useless.

Among those called upon by Worth to do the speech-making were: Captain "Cripple" Rust, the man of the hour; "Greek" Neuhaus, "Monte" Montgomery, Manager "Seacow" Trepte, "Uncle" Cowan, "Scrub" Conger, "Judge" Fuchs and "Rev." Pete Hohman.

They all spoke of practically the same thing (begging pardon), and it amounted to, in a few words, this: "Buy a ticket or two and go to the

* * * * * *

The second big football rally was held on Wednesday, October 25th, 1911. The rally was well supported by the students. One of the features was the fight between the Seniors and the Juniors for the possession of the Senior stairs. The Seniors proved the stronger.

The main talking was done by Worth and Rust. Rust told about the scene of action, and with about five minutes' time, he really said only three

words, "Buy a ticket."

President Worth called upon the bashful club to address the students. "White Hope" White and "Dutch" Rohde responded. "Shorty" Eskew and "Casey" Carmack declined with thanks.

Mr. Samish, president of the Alumni, announced the barn dance, which was to be held at the school on October 28th, 1911, and also the theater

party at the "Cort" on November 17th, 1911.

President "Dutch" Schlichtmann announced the organization of the German Club. A number of entertainments were to be planned, chiefly the Christmas entertainment. No dues were to be charged and all were invited to join.

The third big football rally was held on November 1st for the purpose of boosting the Lick-Cogswell game on Saturday, November 4th.

Through some misunderstanding, the members of the orchestra failed to bring their instruments. President Worth foresaw what would happen if the bunch were disappointed, and therefore called upon Miss Simons to give a recitation. The fellows cried for more, which goes to show that all were satisfied, thanks to Miss Simons.

President Worth called upon Manager "Mr." Trepte to deliver an address to the students. Mr. Trepte announced the time, place and price, and presented the old stand-by, "Buy a ticket." (This ticket buying matter is by no means a joke, although it is considered by many as such, but it is a serious matter). The expense of the football team is very large and should be taken up by every student as a serious matter. The way to back the team is to pay the student body dues, and to go to the games and cheer the men to victory.

As the expense of the team is so great, the manager does not expect to make a large profit on the season. Every one should help to make all activities as successful as possible, because the success of the team means a success for the school. Basketball is a sport which is one of the least expensive. Here is a splendid opportunity for all to show appreciation, and backing up basketball means a swelling of our treasury, which is now in poor condition.

Temen, wind three-quarter, was next called upon. This was Temen's first public appearance on the platform, and his face reminded one of a beet.

Fuchs, varsity scrum half, was called upon to do a little crabbing. It takes an experienced speaker to "crab." "Judge" brought a few tears to the eyes of the spectators by his eloquence.

The fourth big football rally was held on Wednesday, November 7th, in order to boost the Lick-St. Ignatius agme.

The orchestra was present and played two of its ever-ready selections.

The playing was, as usual, very good and made a big hit.

President Worth cracked a big joke about three cheerful liars, and was handed a lemon as a token of appreciation.

"Sitz" Montgomery was ready with a little of the usual line of "bull."
"Judge" Fuchs was also present with his particular "line." Hand
Fuchs the turnips, for he is fast developing in the art of eloquence.

"Uncle" Cowan and Chet. Hacke unburdened their tongues at the rally

for the benefit of the students at large.

"Skinny" Wood, '11, was called upon. He started his talk on football, but quickly changed to basketball, as that is what he was famous for during his attendance at school.

President Worth called upon "Seacow" Trepte to tell the "scrubs"

where the game was to be held so that they would not get lost.

Captain Rust delivered his usual line. Please excuse him for repeating another rally talk, because he is called upon too often. Give him a rest; he needs it.

"Greek" Neuhaus said that there was a Greek playing on the St. Ignatius team, and asked all to imagine the scene "When Greek meets Greek."

Block led the yelling throughout the procedure. Block is now getting into good form and can handle the bunch without any trouble.

The "Fifteen" Class

"The old order changeth yielding place to new,"

And the Freshmen reveal themselves in pleasing ways.

"1915" is a time looked forward to by every San Franciscan. "1915" is a class looked forward to by all at Lick.

As has been the custom in the past few years, to have representatives from the upper classes as officers of the Freshman Class, for a time, so this year the following students are represented:

President, Mr. Carmichael. Vice-President, Mr. Willis. Secretary, Miss Oliver.

Under these competent officers the class will be ready to be governed

by its own members after Christmas.

The class meetings are well attended, and all the members are gradually obtaining the knowledge of parliamentary law. Mr. Fuch's speech to the Freshmen, at their first meeting, was one which all the Freshmen took to heart and which we hope they will practice and strive to uphold their Class of "1915."

Mr. Conger of the Class deserves special mention for having made the big team in football.

The Freshmen, as a whole, have showed the right spirit. We hope they will keep it up throughout their years at Lick.

L. D. S. Social

On Saturday evening, October 21st, 1911, the L. D. S. social and debate was held in the school auditorium.

Mr. Boruck was chairman of the debate and entertainment.

The program was opened by a selection from the school orchestra and was, as usual, very good. The orchestra was ably led by Louis Brunel, '12.

The second number was a song by the school quartet. The quartet consists of Blade, Green, Wolfsohn and Montgomery. They were loudly

applauded by the crowded audience.

The debate between the Seniors and Sophomores, which was to decide the inter-class supremacy, was won by the Sophomores. The debate was very closely contested and made a profitable and interesting number. The Senior debaters were Carmichael, Fuchs and Miss Boyle. The Sophomore debaters were Trauner, Hardy and Miss Lightbody. The judges of the debate were: Mr. Black, chairman; Hon. Mr. Kerrigan and Mr. Potts.

While waiting for the judges the orchestra played a few selections.

A cast, made up from the second-year English classes, presented the

trial scene from "The Merchant of Venice" with great success.

Hon. Judge Kerrigan mounted the platform and proceeded to "tease" the audience by cracking jokes instead of announcing the decision of the judges. He then introduced Mr. Black as the chairman of the judges. Mr. Black then, without hesitating or teasing, passed judgment.

Boys' Glee Club

Twice a week after 3:10, outside the German room, can be heard the harmonious voices of the singers of the Boys' Glee Club. Their hard work and steady practice shows what they can do. Miss Denny deserves special mention for her help to the boys in this organization.

The boys elected Mr. Knoles as President and Mr. Hilback as Secre-

tary.

Their work has progressed so far as to re-elect their quartet, who are four good representatives of the club. Mr. Wolfsohn, Mr. Green, Mr. Montgomery and Mr. Blade are the honorable four.

Keep up your good work. We wish you all success.

The Inniar-Freshman Picnic

The Junior-Freshman picnic, the yearly custom at Lick, to acquaint the Freshmen, was given to "Fifteens" by "Thirteens" on Monday, Octo-

ber 9, 1911, at Ingleside Beach.

A very unique idea was carried out at lunch by making a large bonfire of drift wood, around which the picnickers sat to enjoy their lunch. Beside the many baskets of daintily prepared lunches there was an abundant supply of watermelons and apples from "Bill Pappas."

Lunch being over, the boys and girls entertained their guests in

various ways. They were fortunate in having an ideal day.

As every good time must come to an end, so after 5 o'clock the jolly picnickers left the beach, all agreeing that they had a most enjoyable day.

The Senior Harce

At last the movement of greatest importance to the Senior Class has been started. On November 6th, the committee elected Velisarotas to one of the highest posts of the year—the managing of the Senior Farce.

The fact that the vote cast lacked only one to being unanimous, and also that the time taken by the committee before casting the vote was exceedingly long, shows plainly that the fellow elected was the best and only man for the place. Velisarotas has always shown and given hard work

for any team or social entertainment that he has been manager of. From his first entrance into school until the present time he has been on nearly all of the dance committees and just recently managed the Seniors in their debate.

The Senior Farce is the biggest function of the year and means the success or the failure of the class, financially. This year the school will, perhaps, see its last farce, unless this coming one is a huge success.

We have the play, the actors, and the manager; therefore, there is no reason whatever that the 1912 class cannot put before the public the most successful play that our school has had. No person ever had a more difficult task to carry out than our Senior Farce manager, and it is up to every member of the student body to get their friends and relations to back up "Vel." and make the Senior Farce of the 1912 class a roaring success.

Stanford

The little bunch of alumni down here on the "Farm" have not forgotten old Lick. Whenever we see each other we talk about Lick—about the old days and the new, and about the football team and the track prospects, and we pour over the pages of "The Tiger." We all take a great interest in everything. Remember, that we rejoice when Lick does and we weep when Lick weeps. If ever we can do anything for C. S. M. A. or for a Lick man, we'll "Be right there."

Notes on the Stanford Aquarium.

Artie Wynne is getting to be a crab.

Paul Wormser is a fish when it comes to blowing bubbles in a horse trough for the Sophs.

Sue Salbach is the sole alumnus to make the Stanford Band. He

"Husky" Heynemann hasn't grown much lately. He's still a shrimp. "Bill" Beattie is a shark at painting Junior plugs.

Dan Rohrbach is now a pretty good perch for 2 for 5c segars. (Phew!) Cecil Simon is still a whale in math., and Marguerite Boyd is right in the swim.

Miss Boyd is captain of the Varsity Basketball team.

Art Wynne, though handicapped by lack of experience in Rugby, made a peach of a showing. A sweater and '15 were the well-earned honors awarded him by the Student Body.

Bill Beattie, despite reports, is still unmarried, but prospects are good. Earnest Thompson, Lick '07 and last year's yell leader at Stanford, is managing "The California Outlook" at Los Angeles.

Galifornia

On account of either a misunderstanding or an error the Alumni Notes from California are not in. Our reporter at the University has failed to send in the dope on time, which is as much our fault as anybody's. No doubt the news will be into us in a day or so; therefore those anxious to get some news on the State University might do well to call around to "The Tiger" office and find out all we will be able to tell.



Cirls' Athletics

"Oh, say; by the way, Alice, have you noticed how well the Lick girls are supporting their athletics—especially basketball? I'll admit that there are quite a few that haven't, as yet, gotten the real 'Lick spirit,' but they'll get it before long.

"Did you see

The Lick-Lowell Practice Game

played on the Lowell court some time last month? You certainly can't say the girls didn't support their team for that game. There were over thirty girls to look on and they weren't disappointed either when they went away, even though they had the short end of the score, 19-16. The girls made a dandy showing for their first game together this season. Alice, have you seen that little Freshie—Miss Swanstrom, I think her name is—play basketball? She certainly has very good prospects ahead of her. I don't want to forget Gladys Herbert and Viola Woodhams. Both played goal, but neither were up to their regular standards, especially when it came to shooting free goals. It must have been the difference in courts, because I really didn't know what was the matter. Myrtle Mitchell played her regular good game, only I do wish she wouldn't slack down every once in a while, but I don't know what the girls would do without her and her friendly advice during the games. Every girl played as good as could be expected.

"Oh! don't you know who is on the team? Now, let's see. Gladys Herbert played goal for this game—but I'm not sure if she's a regular—with Viola Woodhams, Myrtle Mitchell and Flora Mathis played guards, with Misses Larson, Halibur and Swanstrom taking care of the center. I'm waiting to see the return game on our court, because I know it will be

good. So don't forget, we'll go together.

"I should say that was a dandy idea to run off the

Interclass

early in the season. Flora didn't like to risk having the interclass called off, so that was the only way out. It really was a shame, Alice, that you were unable to see any of the six games played; they all were worth seeing. Yes, my time's my own today, so I'll tell you about them if you want. Why, no bother at all.

"The first game was between the Freshmen and Seniors. The Freshmen put up an awfully strong fight, with Misses Swanstrom and Ollney playing the best for them. Lack of experience was the only thing against them and which proved in favor of the Seniors. But, don't you think they

did good in keeping the score 23-9? Flora Mathis and Viola Woodhams played very well, while both teams showed good little bits of team work. The second game, between the Sophs. and Juniors was good, because the score ran so close, ending 9-7 in favor of the Junior team. Not a big score for basketball, as the teams were pretty well matched. You missed a very good game by not seeing the 13-15 game. It was very close and exciting, too. And I really thought the Freshies showed up dandy by beating the Juniors. Do you know Miss Sieger? Well, anyway, she played good basketball and did a lot to help win the game for her class. Edyth Mc-Laughlin, Eleanor Hauerkin and Relsa Kern, all Juniors, played good, too, but something was wrong with them that they didn't win. The next game, I think, was the Senior-Sophomore. The Seniors played in their usual form, the regular team girls playing a star game. Ethel Buck showed excellent team work with Myrtle Mitchell; their passes to one another are very good, but should be scattered out with few more girls. Arvila Thorpe, a Sophomore, played very good in this game, and so did Miss Hallibur. Too bad they couldn't win, because they certainly fought and kept the final Senior score 16-9 down pretty good. Don't you think so? The game with the Sophomores and Freshmen was nothing much except that both teams tried hard to get the best of one another. The Freshmen played in their best form and won out finally.

"The last game of the series, between the Juniors and Seniors, was looked forward to by the girls because they thought it would be the hardest fought. But the Seniors ran away from them with the score of 30-5. Flora and Viola were up to their best form as the score shows. The centers all played fine and good team work was shown.

"This brought the Seniors first in the interclass, winning all the three games played in; the Freshmen second by winning two out of three, with the Sophomores and Juniors tie for third place with one game to their credit out of three.

"Oh, yes, by the way, the line-ups for the different teams were as follows: The '12 class was represented by Viola Woodhams and Flora Mathis as goals; Mrytle Mitchell and Ethel Buck as guards; the center by Marguerite Barry, Hilda von der Mehden and Helen Purser. Hilda Bettoli played in one game as touch. '13's team was—goals, Relsa Kern and Edyth McLaughlin; guards, Elise Larson and Eleanor Hauerkin; centers, Carmen Bieber, Leona Goodman and Hazel Moran. The '14's were—Arvila Thorpe and Louisa Thomas as goals; Hazel Bullerdick and Edith Hallibur as guards, with Agnes Oliver, Isabelle Lightbody and Doris Robertson as centers. The '15 goals were Anna Swanstrom and Edna Pudhaber; guards, Alma Sieger and Marguerite Millington; centers, Winifred Taylor, Louise Ollney and Pauline Kuttner.

"I almost forgot to tell you about the school team playing the

Yerha Buena Grammar School Game

The Grammar School team was supposed to be one of the best in the city, but their playing was not as clean as it should have been. Their guards knocked the ball out of the Lick goals' hands whenever they were ready to throw a field goals, thus giving Lick a chance for a free goal and cutting the score down half. Anyway Lick piled up a big score, 19-5, on them.

"I guess you're awfully tired, by now, getting all this basketball talk,

but I'll change over to

Trunis

and give you a little about them and then run along home. It's very funny how few of the girls get interested in tennis. The same girls go out always and they seldom can boast of a new member. I was up watching them play the other day. Helen Purser and Hilda Bettoli, being on the team, play together a good deal and are trying to get up speed, and both are looking forward to a few practice games with outsiders. There are a few Juniors out. Miss Fenner and Miss Hadler are the most constant and are showing marked improvement. The Sophomores haven't anybody who play all the time besides Agnes Oliver and Isabelle Lightbody. Madelyn Hogan was up a few times and showed herself to advantage by her clever serve. Practice would do wonders with her. No one in particular has shown themselves from the Freshmen class; they always need a bit of coaxing to try something new, so Manager Purser will have to get in and arouse their spirit so they'll have a team in shape for the interclass.

"Well, Alice, this is only to prove that the Lick girls show their spirit (only in a very mild form), in many different ways and don't leave all the honors for the boys. Oh, and by the way, the interclass basketball girls had a 'tea' up at the clubhouse, with speeches and talks by the girls and teachers on their new basketball suits and other thing of importance. 'Some speed.' Time to stop, don't you think, so good-bye, till next week

and we'll go to that game."

Girls' Glee Club

It is a fact that everything has a beginning. The beginning of the Girls' Glee Club is due to the unceasing efforts of Miss Denny, our English teacher. It is due to her that the club is already organized and well under way. The Girls extend to her their sincerest thanks for her willing help.

At a girls' meeting, Miss Bettoli was elected Chairman, and Miss Saywell as Secretary. A committee of five girls—Miss Barry, Miss Laycock, Miss Goodman, Miss Hadeler and Miss Lightbody—were appointed to

draft a constitution for the club, which is now near completion.

A very large number of girls joined, a good showing from every class. The girls are practicing earnestly twice a week. It is planned to have them represented at some entertainment of the school in the near future.

We wish you the best of luck, girls, and may this first year of the Girls' Glee Club stand out in the future as the most successful one.

The Girls' Jinks

On Wednesday afternoon, August 13th, 1911, was held the first jinks of the new term. A committee was appointed by the President to carry

out the program and to provide for refreshments.

A stunt from each class was the main feature of the jinks. The Freshmen came dressed in rompers and singing nursery rhymes. Miss Beecher consented to speak a piece. The Sophomores and Juniors represented numerous characters of a circus. The Seniors gave the production of the "Wreck of the Hesperus" in the form of a parody.

A committee of one girl from each class was appointed to select the best stunt from the four classes. The prize, a large pennant, was awarded to the Senior girls. Much thanks is due to the lady teachers for their help

to all the girls.

SHOP NOTES

Machine Shop

A great deal of work has been and is being done in here this quarter. Campion attached an automatic feed to the planer; Hohman finished up a much-needed stand for the Speyer lantern, which has been installed in the Physics lecture room; Hacke is putting the finishing touches on the electric mine hoist; Pilli and Wills certainly made the Wilmerding electricians take a back seat when they mended the dynamo armature, bringing the Lick power plant up to its former efficiency. The Junior apprentices have finished their set of screws and are finishing some of the minor parts of the hoists, while the course-eleven Juniors are just starting their lathe work.

"Chief" Dixon had his arm broken the night of the Alumni dance. However much the boys may josh him, they are really very sorry, and

wish him a speedy recovery.

A very important feature of all of the shops is the night school. This work has continued for nearly two months, three nights a week being shop nights. When the new building is constructed there will be better provision made for night work.

Pattern Shop

This department has been running smoothly, and the second quarter's work is practically done. Many of the "Scrubs" are on the first lathe exercises, which consist mainly of handles for the machine ship files. Coops is working on a centrifugal pump, and Keithon a half-inch steam trap. The students have received many interesting and instructive talks on woodworking tools and machinery: also on methods of molding. The latter give them a working knowledge of the pattern they will construct. Mr. McLaren has installed twenty-six new lockers in the washroom, and is planning for thirty-five in the athletes' shed.

Forge Shap

The general classes in this department are finishing their welding exercises, while a few of the more progressive students are working on their tongs and steel tools. A great deal of work has been done on the wroughtiron parts of the steam and electric hoists that are being assembled in the machine shops. Most of this work has fallen to the lot of Eskew and Hess. Ryan has turned out some very creditable andirons, which are the result of hard and skillful work. Hacke, '13, is doing work for the Wilmerding School.

Houndry

The second quarter finds this shop favored with a great deal of outside work—three gas engine cylinders and a great many reflectors for Redwood City, being only a small part of the work turned out. The housings and many of the smaller parts of the turbine for the new school are being molded. Mr. Lacoste has two classes of Sophomores this quarter, and the great number of molds made necessitate frequent pourings. One of the main features of the Founders' Day celebration was an exhibition of pouring. This event was witnessed by an interested crowd of visitors, who had never before seen such a spectacle. They declared themselves more than satisfied with the business-like methods used in this department.

Mechanical Drawing

This department is turning out a great deal of work, especially from the Senior apprentices. "Spot" Traynor is working on the plans for the new school, which is to have all of the appliances of a thoroughly modern technical institution. Another interesting piece of work is the design of a twenty-five-foot yawl by Thearle and Tucker, who have planned a voyage to the Hawaiian Islands in their creation. They expect to start next summer vacation. Trepte is draughting reinforced concrete culverts, while Schlichtmann is working on a swivel nozzle for the San Francisco Fire Department. Shaw and Wentz are making good progress on a rotary blower. Over in the corner, we find Christensen and "Sleepy" Pyper draughting an air compressor. "Sleepy" does quite a lot of work between yawns and naps.

The Juniors are settling down to work in earnest, for Mr. Heymann's problems have set them to thinking. They are turning out some very creditable jobs on gears and pulleys. The Sophomores are getting into the difficulties of sections and developments, and are realizing what accurate work really is. Most of the Freshies are on their compass exercises

and are doing very well.

Nearly all of last year's graduates in this department have found excellent positions, and we have heard from all except "Farmer" Vieth. Lyon is in the industrial engineering department of the San Francisco Gas and Electric Company, making boiler, engine, turbine and compressor tests. Hauser is working for the Pacific Tank Company, and Walter Moore for the Siskiyou Power Company. "Red" Drew is taking a special course in engineering at the University of California, and Litchfield and Bill Moore are attending Healds' Business College. Spring is with the Western Electric Company; George Johnson with the San Francisco Bridge Company, and Deierssen with a firm of patent attorneys. Al. Wetmore is working for the Piedmont Construction Company. Small is an assistant engineer on the Southern Pacific ferry-boats, and expects to obtain his engineer's certificate in one year, a saving of two years, due to his Lick training. The automobile business has claimed several graduates from this course. "Skipper" Sexton is running a garage in Santa Barbara, while Sid Holman is in partnership with the Middleton Brothers and has as his right-hand man "Dutch" Reimer, who is well known to patrons of the Cort Theater.

Chemistry Notes

After the work of the first quarter the general classes in Chemistry are learning the fundamental theories regarding their work. Through the understanding of the basial principles, the class is enabled to handle intelligently the experiments that are now following in rapid succession. As each quarter goes by, Mr. Tibbitts succeeds in coinciding more fully with the other departments of the school, namely, shop, cookery and science. The girls are about to complete their preparatory work previous to the domestic course.

The Juniors are to be complimented on their splendid work in having completed their preliminary work in six weeks' time. They are also showing great ability in mastering the analysis of natural substances in unknowns. Their conscientious, steady work on this subject is a feat worth talking about and certainly deserving of commendation.

The main point of this course is to enable the student at any time to analyze a mineral in the natural state, thereby determining its constituents. All work thus far is to determine what a substance contains, not the quan-

tity of its consituent parts.

There are no Seniors in the Chemistry Class this year, so the interest

will center around the work of the Juniors.

A new electric furnace is in course of construction for the analyzing of all iron used in the shops, thus uniting more closely the chemical laboratory with the commercial work of the shops.

Domestic Science

Mrs. Thomas now has charge of the domestic science department, Miss Hyde having gone East to the Columbia University for further study. Mrs. Thomas is not a stranger at Lick, for she held the position of cooking teacher previous to Miss Hyde.

Owing to the fact that Miss Hyde left at the end of the first quarter, the work has been a little upset, and no definite outline has been planned

for this quarter.

The girls have been making yeast bread, and have had varied success. They have been experimenting with Thanksgiving essentials, such as mince meat and cranberry sauce, and they expect before the end of the quarter to make several Christmas dishes, and to have one glorious, sticky week of candy making. This is the week to which the girls look forward each year, and Mrs. Thomas has promised not to disappoint them.

Besides the regular Junior girls, there are several girls taking the normal course in cooking. In this work, the practical side is the same as in that of the third year girls, but it includes more theory. They have lectures, give demonstrations before the class and prepare papers on different

subjects; and they have also done some practice teaching.

Mrs. Thomas expects to accomplish a good deal of field work this term, and the girls of both classes have already visited several candy factories, restaurants and hotel kitchens.

In the hygiene class the girls are studying the elements of physiology, digestion, and have been having talks on nursing, which are given to first-year nurses. They are using Davidson's text book, "Human Body and Health"

Home Course

This quarter found the little bungalow in a very attractive condition. The walls have been covered with fresh burlap and the floor and woodwork painted.

The feature of the quarter has been a series of lectures delivered by Mr. Wood of Wilmerding, embracing the subject of building sites, house

construction and sanitation.

Miss Stewart took the girls to "Gumps" for the purpose of studying the artistic and decorative features of the home. The school wishes to acknowledge the courtesy shown the class by the firm. There are many places of interest that the class have still to visit, one being the Hearst Museum at the Affiliated Colleges, to view the splendid exhibition of primtive designs in textiles and pottery.

The work of the second quarter in the Home Course embraces the principles of design applied to the arrangement of window draperies, doors, wainscots, hanging of pictures, placing of furniture and general grouping of color schemes. Many of the students are doing individual work in de-

signing and drawing of room interiors,

The normal students have now passed the preliminary part of their course and have now reached that point where they are taking up the more difficult problems of pedagogy.

Sewing

This year the Freshmen girls make an exceptionally large class, and much credit is due Miss Crittenden in handling them and giving each one individual instruction. The girls, after designing their white undergarments in the drawing class, have measured and drafted their own patterns, and are now well under way, sewing them on. Besides this work, they are sewing on the boys' aprons, used in the shops. In the sewing of the white work Miss F. Martin and Miss Butterworth have done exceedingly well.

With winter at hand, the second year girls, after measuring and drafting patterns, are busily sewing at their winter dresses, and designing the collars and cuffs. Every girl has made a sample card of her material used for the dress, with the name, price and width of goods printed on it. A large number of boys' blouses, also for the shops, are being sewed on by these girls. The work of the Sophomore girls has been very satisfactory. Miss Berg and Miss Thomas deserve special mention.

The Junior girls are still working industriously on the hand-sewed infants' layette. They are at present working on the flannel embroidered and white skirt. The work is being well done, especially that of Miss

Hauerken and Miss Anita Hadeler.

The Senior girls are finishing their winter tailor suits, together with the practice work of setting in pockets. The suits are being well made, and

Miss Myrtle Mitchell deserves credit for her fine work.

The girls of the Normal Course are earnestly working writing up notes and reading on subjects relative to their work. Each girl is making a book of practice stitches and developing a course of sewing for young children, in connection with their work. Miss Phillips has been doing excellent work in this Normal Course.



MADELEINE HOGAN -

Hoothall

Throughout the entire practice season the men worked hard and faithfully, and much praise is due the men who came out every night. As Mr. Petice was forced to stop coaching for a while the team was without the assistance of a coach, but through the efforts of several members of the team, Demming Maclise of California agreed to coach the team. Maclise was just the man needed, as he got right into the mixups with the fellows. Many practice games were played, and, though Lick had the smaller score in most of these, the showing of the team was excellent. Lick was very lucky in the fact that very few men were lost through injuries. Kenny Cormack was the only one very seriously injured. He received a very badly sprained ankle during practice and was forced to stay in bed several weeks. The Lick team felt the loss of Cormack keenly, for his quick and clever passing were features of the games he played in. After a long practice season, on September 30th, Lick played its first league game of Rugby. This game was with our old rivals, Lowell, and marked the reopening of football rivalry between the two schools.

LOWELL 3: LICK 0.

As the score shows, the first league game was very close. Lowell developed a case of fire-and-tong tactics which demoralized the Lick team at first, but gradually the spendid work of the Lick forwards forced Lowell back almost upon their own goal line, but lack of knowledge of the game gave Lowell a free kick and Lick lost the ground they had gained. For the entire first half the ball went back and forth, from one end of the field to the other, neither team being able to score. The first half ended with the ball in the middle of the field and the score 0-0.

Both teams came on the field in the second half with a defermination to do or die. For a while it seemed that neither team would score, but the Lick team weakened for a minute, and Lowell took the advantage and scored the only try of the day. The Lick team came back and fought like tigers, but were unable to score against their more experienced rivals. The game ended with the ball in Lowell's territory and the score 3-0 in Lowell's favor. The line-up was:

Forwards—Hacke, Trepte, Neuhaus, Hohman, Bondshu, Conger, Es-

kew, Henderson.

Half back—MacAbee.
Inside five-eighths—Rust (captain).
Outside five-eighths—Cormack.
Center three-quarters—Rogers.
Right wing—Montgomery.
Left wing—Lenzen.
Full back—Fuchs.

MISSION 13; LICK 5.

In this game Lick found themselves up against the sub-league winners of last year. Lick was not supposed to have a chance. Many changes were in vogue on the Lick team. The two-three-two scrum formation was used instead of the three-two-three, and many new names were on the personnel of the team. The game was played at the Presidio grounds during a bitter cold wind. Lick had the disadvantage of the wind against them during the first half, while nature favored Mission in the second half, as the wind turned and blew from the other direction.

Lick opened the game with a long kick-off by Cormack and followed up under the ball so fast that Mission was unable to advance the ball. The Mission team gradually worked the ball down to Lick's goal line, where the Tigers proved to be like a stone wall, and Mission, though they used all sorts of methods, could not score. Back to the middle of field went the ball on a long drop out. Here the ball stayed for some time, when with a drubbing rush, Mission put the ball over the goal line for the first try of the game. Score, Mission 5, Lick 0. Lick again kicked off and Mission advanced the ball to Lick's 25-yard line. From a line-out, when it seemed certain that Mission would score again, Rogers intercepted a pass and ran 95 yards to a try. Cormack converted. Score, Mission 5, Lick 5.

From then until the end of the first half, Lick fought like only a Lick team knows how to fight and had the ball continually in Mission's territory. The first half ended with the ball in the middle of the field.

The second half was like a battle between giants, the ball zigzagging back and forth between the two goals, neither team scoring until the last ten minutes, when lack of condition began to show on the Lick team, and Mission scored three trys in rapid order, none of which were converted, making the final score, Mission 14, Lick 5. The line-up was:

Forwards—Hacke, Hohman, Eskew, Conger, Rhode, Trepte, Neuhaus,

White, Bondshu.
Half back—Fuchs.

Five-eighths—Carmack and Kahrt.

Center three-quarters—Rogers.

Wing three-quarters—Teman and McAbee.

Full back—Captain Rust.

LICK 13; COGSWELL 3.

By all dope, Cogswell should have won this game by a large margin. But the men who did the doping failed to figure on the spirit of the Lick team. The team came on the field determined to win, and win they did, defeating a team which had lost but one game.

Cogswell opened the game by kicking off well into Lick's territory. The ball was returned to touch and the Cogswellites were fairly swept off their feet by the Lick forwards. When on Cogswell's five-yard line, it seemed as though Lick would surely get a try, when Cogswell were given a free kick. Undaunted, the Lick team forced the ball up to Cogswell's 25-yard line, where Fuchs marked. Montgomery placed the ball squarely between the bars for the first points of the game. Lick 3, Cogswell 0.

For the next ten minutes the ball traveled back and forth between the goals. Shortly before the end of the first half, Lick scored again. From a line-out in the middle of the field, Rogers intercepted a pass and ran fifty yards to a try. Montgomery converted. The first half ended with the ball

in Cogswell's territory.

Lick started the second half with a long kick-off into Cogswell's territory. Cogswell here began to show their first bit of real fight, forcing Lick back to their five-yard line, where "Monty" saved a sure try by a beautiful kick to touch. Throughout the entire game the kicking to touch by Montgomery and Fuchs was a feature. Time and again, it looked as if Cogswell would score, but the Lick spirit shown by the team drowned their hopes. Gradually Cogswell was forced back until, on the 35-yard line, Cowan received the ball and fairly tore his way through the whole Cogswell team for Lick's second try. Montgomery again converted. Score, Lick 13, Cogswell 0. This ended the scoring by Lick, but in the last minute of play, Cogswell scored a try, which was not converted.

The victory was Lick's first league Rugby victory and was certainly well deserved. The game was not marred by any slugging or fighting over decisions, but was a clean, decisive game. Every man on the Lick team

fought like a veteran. The line-up was:

Forwards—Hacke, Trepte, Neuhaus, Conger, Eskew, Rhode and Cowan

Wing forward-Hohman.

Half back—Ducel.

Inside five-eighths—Fuchs.

Outside five-eighths—Montgomery.

Center three-quarters—Rogers.

Right wing three-quarters-White, Traynor.

Left wing three-quarters—Teman.

Full back—Captain Rust.

LICK 0; ST. IGNATIUS 0.

The team came on the field with a determination to win. In this they failed, but in one way the game was a decided victory. The St. Ignatius team, which outweighed the Lick team ten pounds to a man, were constantly offside and played throughout the kind of ball known as "dirty football." The Lick team are to be complimented on the fine way they resented

this style of game.

St. Ignatius opened the game by kicking off and then the ball started its tireless journey back and forth between goals, now at one end, now at the other. The Lick backs, in the few chances they had with the ball, showed that they were superior to the St. Ignatius backs, as were also the forwards, but, owing to the superior weight of the St. Ignatius forwards, they had slightly the better of it. The game was a forwards' game from start to finish, the backs got the ball only seldom. Trepte, Neuhaus and Hohman shone for the forwards, while Ducel and Fuchs played the best game in the back field. Just at the end of the game, Montgomery made a beautiful

try for a field goal, which fell short only a few feet. The game ended with the ball close to St. Ignatius' goal. The line-up was:

Forwards—Neuhaus, Trepte, Conger, Rhode, Eskew, Cowan, Hacke. Wing forward—Hohman.

Half back—Ducel.

Five-eighths-Fuchs and Montgomery.

Three-quarters—Rogers, McAbee, Teman.

Full back-Rust.

SUMMARY.

Although one tie is to be played off, the season was practically over after the St. Ignatius game. The season has been a successful one. The team, though not a winning one, has been successful. At the starting of the season the squad knew little or nothing about the game. They have obtained knowledge enough of the game to turn out a winning team next year. The season has also been a success financially. As the team needed entire new outfits, the expenses this year were very heavy, but, by the excellent work of Manager Trepte, this expense has been more than covered. The school has also supported the team in fine style this fall. There has been a large rooting section at every game and all the rooters-also the girls—stuck with the team no matter how bad they lost. This is the spirit that has made Lick famous.

Much of the success of the team has been due to the coaching of Demming Maclise. He has worked with the team like one of them and brought the team out of a slump that threatened to ruin Rugby football at Lick. In order to coach Lick, he gave up a study at the University, and "The Tiger" takes this opportunity, on behalf of the student body, to thank Demming for work which has made the Lick Rugby team a pride to the school.

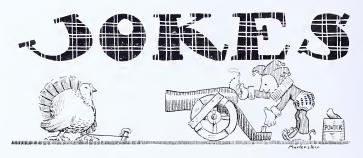
Track

Owing to the fact that all athletic interests were centered around Rugby, the track meets, which were scheduled to come off this fall were called off. Notwithstanding this fact, the regular fall interclass was held on the Wilmerding oval. Block L men were excluded from the meet, consequently the races were close and interesting. The Sophomore ('14) were first, Juniors ('13) second, Seniors ('12) third, and the Freshmen ('14) fourth.

Swimming

In the Academic Swimming Meet one new man was successful enough to mae his Bloc L. This fellow is Benton of the '14 class. He swam a good third in the record breaking 220. Considering that he is but a Sophomore, he gives promise of much improvement. The relay team also placed, getting a very good second.

Captain Worth wants all to get out and train-there are good things coming.



Ryan lately bought a horse for his delivery wagon. It was the thinnest and poorest looking animal that ever lived since Noah threw his animalia overboard on Mt. Ararat. However the price was as thin as the horse, and John thought he'd take a chance.

"Still, suppose this animal turns out to be not serviceable and you're

not here when I bring him back?" asked Ryan, dubiously.
"Well," replied the dealer, "just shove him under the stable door with your card attached."

A JOKE BY GREEN, OUR COLOR ARTIST.

Black, a white man, and White, a black man, thought a fellow named Brown was rather green and tried to sell him a gray horse. But Brown was well read and he couldn't be fooled. Now Black and White are blue.

Mr. Plumb (in Senior Civics)—"Does any one know anything about the 'No Nothing Party?' (Silence). Ah! I now know nobody knows nothing about the 'No Nothing Party.'"

AT BILL'S.

Bill-"Dog or cured ham?"

Worth-"Gimme a dog. The last cured ham I got was only convalescent."

Dutton-"I think I'll just go away and die."

Brown—"Oh, behikel, what's the matter?"

Dutton-"Why, this book says that every time we breathe a hundred muscles are set to work."

A SLIGHT MISTAKE.

(While orchestra was rehearsing)

Block—"Say, what's that noise?"

Rust-"That's a truck going by."

Frenchman—"I cannot understand ze Engleeshe language. I learn how to pronounce ze word 'hydrophobia,' and zen I learn zat ze doctors pronounce it 'fatal.'"

OUR HALL OF FAME.

Louis Brunel, leader of that "divine" orchestra, plays "Alexander's Ragtime Band" mighty fine. It is rumored that John Milton has turned over and cried: "Ah! I would have been a follower of Terpsichore had I heard such strains in my youth."

Jay Green, the crack artist and cover-designer, has a notion he can

sing. Fellows, go and offer your sympathy to his parents!

Harry Carmichael, renowned debater, is going to be a dentist—just as the Carmichaels have been for twenty generations.

"Judge" Fuchs, our tiny fullback, played "leftwing" after the Lowell

game.

"Uncle" Cowen, the boy with porcupine haircut, claims he will some lay be a millionaire IF another "Uncle" dies and leaves him a pile. (I say, printer, old chap, make that "if" capital letters).

P. Austin, our six feet three auditor, has the dearest, sweetest, derby

"beany" you ever saw this side of Fifth avenue, N. Y.

Mast Wolfsohn, sentimentalist and lover of classics, is looking for a nice, quiet, sweet girl. Nay! nay! Pauline! Crush not this fragrant rose. Wouldn't thou—ah! tut.

When Johnny Ryan went to buy his horse he asked the auctioneer the price. The auctioneer was just from the Old Country, so he said: "Four pound." "G'wan," said John, looking at the lean nag; "I asked the price, not the weight."

A NEW SOAP.

Mr. Tibbets—"Could you tell me what cast-steel is?" New Student—"It's the soap that mother uses at home."

A LAST BOXING.

Smart Fellow—"Every fighter is bound to get a last, good boxing by some one."

Fight Fan-"And who could that 'some one' be?"

Smart Fellow-"The undertaker, of course."

Miss B.—"My brother is a fine type of man; he makes little things count."

Miss O-"How does he do it?"

Miss B.—"He teaches arithmetic in the infants' school."

IN THE STRENGTH CLASS.

Mr. H.—"Ah, Mr. Oswald, I see you wish to ask a question. What

Oswald—"I want to know if the sun is supported in the sky by its beams."

Judge Fuchs—"Give me your last residence, prisoner."
The Prisoner—"I dunno; but I think it'll be the cemetery."



NOTICE.

Notice is hereby given to the public that the students of C. S. M. A. have formed a Discord Association known as the Lick Glee Club.

Girls (rushing up to the teacher in the hall)—"We girls are going to cook your dinner today; what will you have?"

Teacher—"Er—cold beef and pickles."

TO THOSE RUFF-NECKS AT THE DANCES.

Mr. Ruffian was especially appreciated by the entire assembly. Owing to a severe chill he was unavoidably absent.

Miss D.—"Mr. White, spell 'wrong."

White—"R-o-n-g."

Miss D.—"That's wrong."

White—"That's what you asked me to spell."

A policeman rushed up to a crowd in the street.

"What's up?" he asked, roughly.

A Voice in the Crowd—"Umbrellas; it's raining."

HOW THE GIRLS DO GEOMETRY.

A "constant" is a limit.

A "steady" is a constant.

Therefore a "steady" is the limit.

A vagrant was brought before a Justice of the Peace, an inexperienced young lawyer, who was serving while the Judge was away. "Jim Jennings, alias Jones," said the officer.

"I'll try the girl first," said the Judge; "bring in Alice."

RATHER HARD!

Dutton has proven that his head is in good standing with solid geometry.

Brilliant Soph. in Chem.—"The composition of a compound is determined by synthesis and antithesis."

Scrub-"Now that winter is coming, how can I keep my feet from going to sleep?"

Senior—"Don't let them turn in."

Over the keys, she ran her fingers And playfully struck the wood; Then moved in lightning rapidity, Just like good stenographers should.

She-"I hate a man who bets."

He-"Yes, but one who doesn't is no bettor."

TIGHTWAD.

He had appointed a meeting place and they met. She was looking in the candy window.

"Well," he said, "what are you going to have tonight?"

"Oh, I'll just take what you'll take, Percy."

"Alright then, we'll both take a walk," he said, and led her away.

Mr. Plumb—"The opposite of brittle is tough, therefore the people of North Beach are opposite from brittle."

PURPOSELY MISUNDERSTOOD.

Romain approached the staff member and tapped him on the shoulder. "I've got a peach of a poem for you. Swellest little sonnet you ever read. I've written it on 'My Father's Barn.'"

"Ah!" exclaimed the S. M., much relieved, "I feared you had written it on paper. If I ever ride by your father's barn I'll stop and read it."

Mr. P. (in Senior Physics)—"Give me an example of adhesion." High—"Flypaper."

M. T. O. (in Senior German)—"What is wrong with your German poem, Miss Cahen?"

Miss Cahen-"I have four feet."

BRILLIANT!

Mr. P. (in Senior Civics)—"Every person has certain federal rights the moment they are born. What are they, Block?"

Block—"Free speech."

PERHAPS HE WAS A SENIOR.

(While on a vacation, a staff member found this note on the brink of Niagara Falls. It was writen by some unfortunate fellow who evidently studied German):

Was it "Deutsch" that did it; Was it just this awful bore; That has ruined so many thousands, And made loonies by the score?

Ya! mein lieber Schatz.

It was this that made me flee;
Raised my hair, six long inches,
And has made a boob of me.

Grieve not, my fair one
That I shall n'er return;
'Member that my mind is shattered
And my "Deutsch" I could not learn.

J. R.

Worth went up to Stockton with the Y. M. C. A. bunch. On the way up the porter heard an awful noise in Fred's berth. He put his head in to find out the cause. "I say, old boy," said Fred, "Gimme a corkscrew will you?"

"Can't allow no corkscrews in the beds, sir."

"Never mind bringing it in the bed; just use it to dig out a pillow that's sort of worked its way into my ear."

WOMAN'S REASONING.

He-"What makes you think baseball is crooked?"

She—"When a man deliberately steals, and isn't put out of the game, it is a sure sign."

Carmichael (with a long sigh)—"Ah, yes, it's love that makes the world go round."

Whitmore—"Ah, yes, that must account for the fact that so many girls are giddy."

Teacher (to Pupil just from Forge)—"You remind me of a piece of flannel."

Pupil-"How's that?"

Teacher-"You seem to shrink from washing."

SMART GUY.

Worth—"The other day I got a ride on the scenic railway and I didn't have a dime to pay for it."

Dutton (waking up)--"Tell me how you did it."

Worth—"I gave them two nickels."

Teacher (reading aloud)—"The weary sentinel leaned on his gun and stole a few minutes' sleep."

J. Neuhaus-"Did he steal it from his 'nap'-sack?"

Cowen—"Rust just called me an 'Uncle.'."

Vel—"Just like Rust to go blurting out the truth. He's got no tact at all."

ON THE EIGHTH-STREET LINE.

Miss Buck—"Goodness me, what ever is the matter?"

Miss McLoughlin-"Oh dear, the car ran over a cat."

Miss B.—"Was the cat on the track?"

By-Standing Scrub—"Oh, no; the car chased the cat up an alley."

IN THE COOKING CLASS.

Young Maid—"Here's a sample of my first pudding. What do you think of it?"

Miss H.—"I'd call it mediocre."

Y. M.—"Oh, dear no; it's tapioca."

Census Man-"Your ages, please?"

Miss Sixty—"I'm thirty-six."

Miss Fifty-"I'm twenty-six."

Miss Twenty-two—"By the way the calculation goes I'll be born in two years."

Timely Hints on Dress

"I confess I cannot help forming some opinion of a man's sense and character from his dress." Lord Chesterfield to his son.

For men who are closely confined a striped suit is the appointed style.

Don't wear pajamas just because the invitation reads "Evening Dress."

Don't wear a loud suit simply because you're going to call on a deaf man.

Don't wear a suit with a check in it to the races.

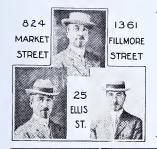
To make your trousers last, simply make your coat first.

Are trousers singular or plural? If a man has them on, they're plural. If he is without them it's certainly singular.

Be careful of your personal appearance—it is the part of a gentleman to be neat. The public is critical on this point. "The Hastings" can fit you out with the things a gentleman wears.

Hastings Clothing Company

POST and GRANT AVENUE



Winter Styles—Rough Hats \$2.50 to \$7.00

Tweeds, Scratch Felts, Velours

I. C. MEUSSDORFFER SONS

824 MARKET STREET

Buy a Meussdorffer Hat Order for Christmas

Morgan Thanks the 1912 Class

For recommending his CLASS PINS to so many other schools

MEDALS :: EMBLEMS :: CUPS

JAMES A. MORGAN

2627 DWIGHT WAY BERKELEY Phone Berkeley 2566

Goldberg, Bowen & Co.

Fine Teas, Coffees Wines Grocers and Liquors

Cigars and Household Utensils

OUR STORES:

Sutter Street, bet. Kearny and Grant Ave. 2829 California Street

1401 Haight Street Coffee Roasting Department-965 SUTTER STREET, San Francisco Oakland: 13th and Clay Streets

TELEPHONES: Pacific Home Sutter 1 C 4141 West 101 S 1011 Market 1 S 4111

Oakland 2524

HARDWOODS

The Largest Stock West of Chicago

WHITE BROTHERS

Fifth and Brannan Streets

San Francisco

A 5211



Phone West 6347

J.F.KINMAN

Photographic Materials

2207 FILLMORE STREET

Bring us your choice films for Enlargement

Any one can do kodak finishing, but few can do it as well as we do. Our plant is fitted with every convenience to insure perfect work. We are headquarters for everything for the amateur.

Patronize Home Industry

Address all communications to 241 Sansome Street

Telephone Kearny 3753

G. EDWIN PRUNK Instructor of Ball Room Dancing

Ball Room, Banquet Room and Lodge Hall To-Let
After March 1st. 1912

Cotillion Hall,
159 Church St., Near Market
Class Every Monday and Friday
7:30 to 9 P. M.
Informal Dancing 9 to 12
Private Lessons by Appointment

Residence, 616 Baker Street, Near Fulton San Francisco, Cal. Phones West 8212 Home S 4471

Get a Heald Education

Ten Colleges under one management.

A half century of progressive success.

40,000 graduates to help you.

New Building—new equipment in San Francisco.

The largest school room space of any Business College west of Chicago.

All are assurances to the pupil who attends Heald's that he will receive full return for his time and money.

Call and see our new building, our enthusiastic classes and our elegant quarters.

HEALD'S BUSINESS COLLEGE

San Francisco.

425 McALLISTER STREET, SIXTEENTH and SAN PABLO, Oakland.

Stockton, Fresno, San Jose, Santa Cruz, Long Beach, Riverside, Reno and Chico.

Our Athletic Department

The most complete department of its kind on the Pacific Coast

High Grade Rough-neck Sweaters

Baseball Supplies of every description

Bathing, Gymnasium and Track Suits

Shoes for every sport Coat Sweaters and Jerseys Lawn Tennis Supplies Football, Golf and Archery Goods



Label on anything Atheltic means Ouality and Satisfaction



A CLUB for High School Fellows

Two Gymnasiums, Handball Courts, Swimming Pool, Bowling Alleys, Billiard Room, Club Rooms, Reading Room, Etc., Etc.

Boys' Division, Y. M. C. A.

Golden Gate and Leavenworth

HIGH SCHOOL MEMBERSHIP \$9.00 PER YEAR Call and See

RAYMOND O. HANSON

Boys' Work Director

R. Brown (talking to himself in the library)—"Gee, this is queer. People have told me that babies couldn't talk, but here it says: 'Job cursed the day he was born.'"

WE ARE BUILDING THE

Classy Suits

The tailors are charging \$30 and \$35 for \$22.50 and \$25.00. Buy from Pike Woolen Company direct and save money. Yours for a right suit at a right price

PIKE WOOLEN CO.

OAKLAND'S LARGEST TAILORING HOUSE
1157-59-61 FRANKLIN STREET. Second Floor

Transportation refunded to San Francisco Customers

A. G. SPALDING & BROS.

Are the Largest Manufacturers in the World of

Official Equipment
FOR ALL ATHLETIC SPORTS
AND PASTIMES



The
SPALDING
Trade-Mark
is known throughout
the world as a
Guarantee

of Quality

IF YOU are interested in Athletic Sport you should have a copy of the Spalding Catalogue. It's a complete encyclopedia of What's New in Sport and is sent free on request.

A. G. SPALDING & BROS.

Phone West 6809

BORTFELD'S

Exclusive Styles in Hats

1457 FILLMORE STREET
Corner O'Farrell Street

Supply Yourself at

Mrs. B. Dettling's

With

School Supplies, Stationery Lunch, Fine Candies Drawing Materials

386 Utah St.

San Francisco

Phone Market 3879 SWISS Watchmakers and Jewelers

STEFFEN BROS., Inc.

 $2146\ MISSION$ ST., Near 17th

Watches, Diamonds, Jewelry

CHRISTMAS STOCK Now Ready Larger and Better Than Ever A Very Small Payment Will Secure

Any Article A Specially Large Assortment of Genuine Howard, Elgin or Waltham

Watches
22, 18 and 14k Hand-Made Wedding
Rings Sold by Weight
We clean for \$1.00, any kind of
Watch and guarantee corect time
for two years
Cuckoo Clocks \$1.00 up

Hills Bros.

Highest
Grade

COFFFF

The peculiar, penetrating, persistent flavor of skillfully blended, rare, old coffee is in every package and cannot escape, as it is packed in Vacuum.

Nature produced the flavor, the Vacuum Can retains it.

LOUIS SHEELINE

Special Inducements to High School Students

COLLEGE TAILOR

404 Fourteenth St., Oakland

Up-to-date Classy Suits at Popular Prices

JOS. S. FORDERER President GEO. S. FORDERER Sec. and Mgr.

FORDERER CORNICE WORKS

Tile, Slate and Metal Roofing, Patented Ventilated Skylights, Architectural Sheet Metal Works, Copper and Zinc Ornaments FIRE PROOF METAL WINDOW FRAMES AND SASH Accepted by National Fire Underwriters

POTRERO AVENUE AND SIXTEENTH STREET

San Francisco

The Overall Laundry and Supply Co.

JOS. T. CAVANAUGH, Proprietor.

Calls Made Every Friday at 4:30 p. m. and Deliveries Made Monday at 8:30 a. m.

BUTTONS SEWED ON AND MENDING DONE

Overalls, 12½ cents Pattern Makers' Suits, 15 cents Jumpers, 12½ cents
Overalls with Bib, 12½ cents

1140 HARRISON STREET, Near Eighth
Telephone Market 143

San Francisco

Janssen Lithogravure and Label Co.

The Printers Who Know

DESIGNING Color and Commercial Printing of Every Description * *

533 MISSION STREET

SAN FRANCISCO

Cuts for High School Annuals

Commercial Art Company

53 Third Street

Send for samples and prices

San Francisco, Cal.

W. P.—

School Books School Supplies Stationery

> Candies, Ice Cream Drawing Instruments and Materials

2007 SIXTEENTH STREET

Phone Market 1083



Machine Shop Tools and Supplies STEEL, ETC.

C. W. MARWEDEL
76-80 FIRST ST. SAN FRANCISCO

The World Advances

SHORTHAND has advanced. Gregg has displaced to a large extent the old shaded systems. WE MAKE A SPECIALTY OF GREGG.

Thinking of Bookkeeping? Study the "Actual Business" Method taught only at

The San Francisco Business College

908 MARKET STREET

CORNER EDDY AND POWELL

Phone Market 2716

Home Phone M 2128

Dairy Delivery Co.

STANDS FOR QUALITY

Our Specialties
PASTEURIZED MILK AND CREAM

H. R. TIMM'S CERTIFIED MILK

Western Pacific Fruit Market

PAPPAS BROS.



Groceries
Fruits
Vegetables
Ice Cream
and
Candy





WILLIAM (BILL) PAPPAS



Nice Cold and Hot Lunches Delicacies



Come where the good fellows dine
2001 SIXTEENTH STREET, CORNER UTAH

Books Diaries Xmas Cards Suit Cases Leather Goods Fancy Box Paper

Cunningham, Curtiss & Welch

565-571 MARKET STREET Between 1st and 2nd Sts.



Makers of

Sweater Coats Gymnasium Suits Bathing Suits Athletic Apparel



Underwear and Hosiery

Grant Avenue, at Post Street SAN FRANCISCO

Do You Want to Know Anything About

MACHINERY

If so, write us. Data cheerfully given

MACHINE TOOLS

PLANERS DRILL PRESSES BOLT CUTTERS PIPE MACHINES MILLING MACHINES

PUNCHES SHEARS BENDING ROLLS PNEUMATIC TOOLS

DRILL GRINDERS BCILERS AND ENGINES HCISTS AND

MINING MACHINERY

SAW MILL AND WOOD-WCRKING MACHINERY

DODGE"

Transmission Machinery and Supplies

Harron, Rickard & McCone SAN FRANCISCO

MOLDERS PLANERS FLOORERS SHAPERS BAND SAWS

MACHINES SWING SAWS RESAWS RIP SAWS MORTISERS TENONERS

\$1.90 **AMALPAIS**



Take MUIR WOODS Trip \$1.90

Take BOTH TRIPS for \$2.90

Over the Crookedest Railroad in the world

IOHN FINN, President

ROBERT B. FINN. Secretary

John Finn Metal Works

Babbitt Metals and Solder Galvanizing and Sherardizing

372 to 398 SECOND STREET

SAN FRANCISCO

Telephones: Kearny 533 Home J 3533

GEO. R. SNEATH, President

THOS. A. DeLAY, Secretary

Consumers Ice Company

Manufacturers of PURE ICE from Distilled Water

OFFICE AND FACTORY 436 to 448 Eighth St.

Phones Market 78

Home J 1443

SAN FRANCISCO



LARGE CANDY STORES

Geo. Kaas & Sons.

San Francisco.

MALTHOID ROOFING

Known all over the world for its wonderful enduring, weather-defying qualities. Requires no paint—always ready for instant use. A hammer, together with tin caps, nails and cement, which are furnished free, are all that are needed to make a perfect roof.

P and B Building Paper

For Every Type of Building

in which building paper can be used P & B is the ideal. Its strength, durability, imperviousness to moisture and the absence of all odor is known and appreciated by all leading architects and contractors.

WRITE FOR ILLUSTRATED BOOKLET

THE PARAFFINE PAINT CO.

MAKERS OF

Satisfactory Roofing

34 FIRST STREET

SAN FRANCISCO, CAL.



HELP YOUR EYES

By using MAYERLE'S GERMAN EYE-WATER. the Great Eye Tonic, 50c. Demand the Genuine. Mayerle's Antiseptic Eye-Glass Wiper Prevents Infection to the Eye from Unclean Eye-Glasses, 3 for 25c.

Mayerle's Eye-Glasses are absolutely guaranteed. Phones Franklin 3279 Home C 4933

GEORGE MAYERLE. 960 Market St.

Graduate German Expert Optician-Charter Member American Assoication of Opticians.

Carried in Vest Pocket



Size 21/2 x 33/8 x 1 inch

EXPO POLICE CAMERA

Does all a Larger Camera Can Do

\P 12 exposure film 25c	· · · · · /h ==
¶ Makes pictures 1x1½ inches	with
¶ Has Focal Plane Shutter . ¶ Expo Post Card Enlarger .	case
C Expo Post Card Enlarger .	\$3.00 V

SUNSET PHOTO SUPPLY CO.

895 MARKET ST., SAN FRANCISCO

SON & FARLESS

Sporting Goods



Cutlery, Fishing Tackle, Dog Collars. Ammunition.

Baseball, Football, Tennis and other Athletic Goods

1726 FILLMORE STREET

Bet. Post and Sutter

We Are Advertisers for

Classy Footwear

POPULAR PRICES

Short Vamps, New Lasts,

EVENING SLIPPERS

in all colors SATIN. VELVET. AND SUE DE

Exclusive Novelties

Open Saturdays till 10:00 P. M.



THE LARGE UP-STAIRS SHOE STORE Second Floor, Flood Bldg. MARKET, POWELL AND ELLIS STS. Open Saturdays Till 10 P. M.

WE PRINT

WEBIND!

2\$5

ALTHOF & BAHLS

PRINTERS AND BOOKBINDERS

SIBZ

330 JACKSON STREET

SAN FRANCISCO, CALIFORNIA

TELEPHONES — KEARNY 1888 — HOME C 1888

PUCKETT'S Terpsichorean Temple



A more beautiful Ball Room can hardly be conceived.

Dedicated to lovers of the art of

REFINED DANCING

Puckett's Assembly Rooms and College of Dancing, Sutter Street, between Polk and Van Ness.

Private Lessons
PHONE—Franklin 118

CLASSES—Mondays and Thursdays SOCIALS—Wednesdays and Fridays

Eight Trains Every Day

Each way between

San Francisco

Los Angeles

8 Shore Line Limited A. M.

8:05 The Coaster A. M.

10:40 The Los Angeles Passenger A. M.

3:20 San Joaquin Valley Flyer

> 4 Sunset Express P. M.

6 The Owl Limited P. M.

8 The Lark Limited P. M.

8:10 The Los Angeles and San Francisco Passenger P. M. Luxuriously Furnished

Completely Equipped

Some by day for the tourist and the sightseer and those who would know the "Road of a Thousand Wonders." Others by night for the convenience of the busy man and merchant.

SOUTHERN PACIFIC

TICKET OFFICES =

884 Market Street Palace Hotel Market Street Ferry Depot Third and Townsend Sts., San Francisco





For Rugby BOX BACKS

OF the scores of Raglans seen about the Gridiron, none can be classed with this JUVENILE BOX BACK MODEL. (It's your boy's ideas). Made in those tweeds and diagonals that drape so perfectly. Of course you have seen the Box Suit!

\$15.00 \$20.00 \$25.00 \$30.00 SUITS and OVERCOATS

THE JUVENILE

130 Grant Avenue

tyle originators to

San Francisco

TELL US YOU ARE FROM LICK WHEN YOU BUY YOURS!